SOUTHERN TEXTILE BULLETIN

VOL. III CHARLOTTE, N. C., APRIL 18, 1912 NUMBER 7

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SOUTHERN
TEXTILE BULLETIN

VOL. 3 CHARLOTTE, N. C., APRIL 18, 1912 NUMBER 7

Modern Mill Construction

J. E. Sirrine before American Cotton Manufacturers Association

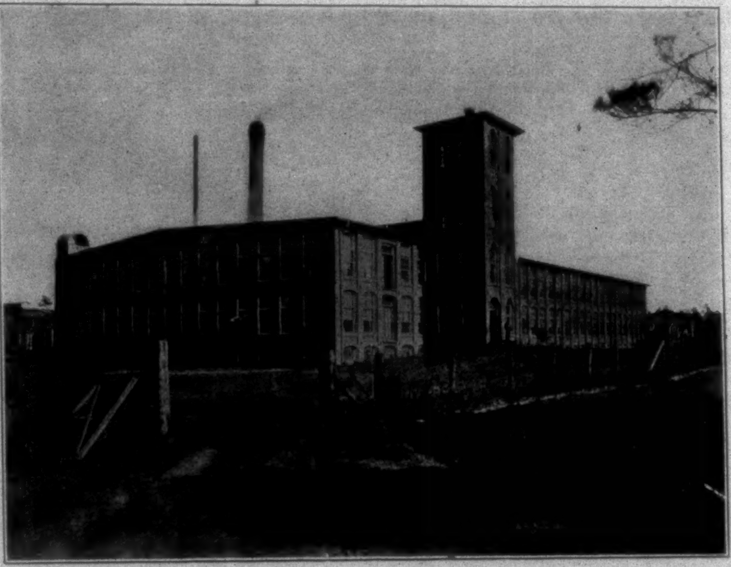
IN the beginning of the development of any great manufacturing industry, the first period is usually one of many and radical changes, not only in the character of the product, but also in the tools or machinery to produce it. A most marked example of this is now going on in the automobile industry, which for the past ten years has practically not only redesigned its product, but has virtually consigned to the scrap heap the original machinery installed. Naturally the enormous development charges incident to the business reflects itself in the high price of the product, and only when such a stage is reached that the manufacture is standardized, will the article be reduced to a commercial basis.

This expansion and development occurs in the history of every manufactured article, whether it be a complicated machine with an enormous number of parts, or a simple article of homegeneous character, such as cotton cloth or yarns. Happily, the textile art has passed through its earlier stages, and has come at last to such a high degree of standardization that practically the same price is obtained by each manufacturer for the same article produced at the same time.

To a certain extent this standardization is likely to lead to stagnation, for the reason that the margins of profit are so reduced that very few mills believe they can afford to make extensive alterations or extensive changes in plants already equipped and in fair condition with respect to their neighbors in the same way.

It is also to be questioned whether there is any serious likelihood of a radical change in the textile machinery as we know it today, and, therefore, the present outlook seems to offer very little in way of serious departures from the accepted process om manufacture. It is then upon the small improvements that we must depend for any decrease in manufacturing cost, and it is to the elimination of small wastes and upon slight increases in production that the manufacturer must now look.

The first step which any mill engineer takes in the preparation of his plans is to select a site where foundations ,drainage, light and air are to be had to the best advantage, and also where economy of cost can be reduced to a minimum. Following this he must arrange the various buildings which make up the plant in such a way that the product will not only require a minimum amount of handling but also that it will travel in one direction as far as possible, and not cross itself or interfere with the progress of other work which is in a different stage of manufacture.



Delgado Mills, Wilmington, N. C.

There is very little use in elaborating the necessity for an economical site on which to build a plant, as the local conditions to a large extent fix this, and it need only be said that every mill as far as possible should be kept out of a valley or hollow. If the plant is to be run by steam it is usually very much cheaper to pump the necessary water supply than it is to attempt to build within reach of the stream, and thereby entail large expense in the way of foundation. As a general proposition all the space below the usable floors is wasted, and where high basement walls are built, the money going into them is an unprofitable investment. In addition to these objections to a low or very badly sloping site ,this condition almost always enforces an uneconomical arrangement of the buildings, and seriously interferes with the light and ventilation which are vital to the proper operation of the plant.

Having arranged the plant to this end, the machinery must be suitably housed, and here perhaps as much as any other place, there is a large amount of improvement possible over the conventional type of mill.

In the selection of materials for mill buildings up to a few years ago there has been little room for doubt as to which was the most economical. At that time a good quality of brick could be obtained at a low price and long leaf pine timber was both abundant and cheap, so that brick wall and hard pine floors were generally accepted as the standard materials with which to build a mill. This was rightly so for the reason that the use of reinforced concrete or of steel was prohibited by the tremendous difference in the cost but we are now rapidly approaching the point when they are so near together that the increased value of more stable floor construction is sufficient to offset the extra cost.

It has been generally urged that no special advantage in the cost of insurance can be gained by the use of non-combustible material for mill floors, and if this were the only saving undoubtedly those who oppose any change in the conventional form of construction would be right. It has also been axiomatic that machinery would wear out within a few years, or be so changed in its form that the obsoletion feature would render it unprofitable to use for a long period of time. The writer believes that in future the changes in the general type of mill machinery will be almost entirely in the line of small improvements, most of which can be applied to machinery already in use, and, therefore, he sees no reason why it should be necessary to hasten the wearing out of machinery by the refusal to place it on the proper kind of foundation.

With the class of lumber now obtainable at any reasonable price, and in fact with any class of lumber it is almost certain that within a few months after being installed, all machinery in a mill will be out of level, due to the unequal sagging of floor timbers, and this process of change in the floor levels increases with the age of the mill, so that at no time except the first few weeks after releveling, is the machinery runing truly in its bearings, which of course, means a very rapid wear on all moving parts, and a consequent unsteadiness throughout the whole machine.

With the exception of the loom (which is a self-contained machine having only two bearings to each

(Continued on next page)

Modern Mill Construction.

(Continued from preceding page)

of its various shafts) all textile machinery has a number of points of support, and therefore, to maintain the alignment, it is necessary that these machines be set on an unyielding floor.

There are many varying opinions as to the relative advantages of steel beams versus concrete as framing for mill floors, and undoubtedly there are places where each has its advantages. If the mill is to be mechanically driven and there is a large amount of shafting to be provided for, it is much simpler to use steel beams, since no accurate layout of the shafting has to be made in advance, and the location of the shafting hangers may be readily changed at any time.

There is, however, a very serious objection to their use from the standpoint of damage from fire, as under a fairly high heat they will take a permanent set that cannot be removed. It will not be very long before the insurance companies will insist that all steel beams be fireproofed and when the expense of this is added, it will be found that their cost is prohibitive Ordnarily, where steel beams are used, it is in conjunction with hard pine flooring, and while the deflection of the floor plank is small as compared with that of a long beam at the same time it lacks the rigidity of a concrete floor and therefore it is the writer's opinion that it is very much better to incur the additional expense necessary to secure a concrete floor.

It is getting to be more and more difficult to secure a satisfactory quality of brick at a reasonable price, and the point is now about reached where there is very little difference in cost between the ordinary brick wall and a skeleton type of reinforced concrete wall, with all the advantages of light in favor of the latter.

The difference in cost, if any, against the reinforced concrete, will soon be wiped out as contractors become more familiar with this type of construction, and by standardizing the work reduce the cost of forms. It is, therefore, altogether probable that within a few years the majority of new mills will be of the reinforced concrete type, having large window areas and consequently better lighted interiors. It is also highly probable that with the increasing size of the new plants that are beng built, the introduction of electric transmission will be more common, and many of the disadvantages of this type of building, in enabling changes to be made in location of machinery, will be overcome.

This class of construction is perhaps the most adaptable to general conditions of any that has ever been used in industrial work, and it has the further advantage of making it very difficult to get holes through the floor, thereby reducing the danger of fire gettting out of the room in which it starts. The indestructibility of concrete has also led largely to its use for basement, window sills, outside platforms and steps, both around the mill and in the warehouses and with the class of lumber available today, this is a very important item. The writer has seen many instances in the last few years where outside platforms have been practically destroyed within four or five years, which makes the depreciation charge a big interest on the cost of permanent concrete structures. It is not surprising, therefore, to find that a great many of the larger mills who have gone into the question, are now having all renewals of outside steps and platforms made with concrete.

One feature of mill construction which in the past, and especially in the South, has received little attention is the plumbing and general sanitary arrangements. It has been the custom to very frequently incorporate the toilet rooms in the main body of the building where neither light nor proper ventilation was available, and as practically all of the inside partitions were of wood, the toilet rooms were soon in such a condition that they were not only extremely offensive, but really dangerous to health. In some states where the factory inspection laws are very rigid, this matter has received conscientious and close attention, but in a great many places and especially in some mills that were built without attention and the care of an engineer, the conditions of the toilet rooms was indescribable and absolutely indefensible. Fortunately, there is a great change for the better in this respect, and the modern mills of today are devoting a great deal of time, and are spending more money to make these quarters not only well ventilated but so arragned that they can be kept perfectly clean.

The only way to properly do this is to have as little wood as possible in the toilet rooms, and to have all the fixtures enameled inside and out. Where woodwork is used it should be painted with enamel paint and so arranged that the frequent washing of the rooms will not rot the woodwork. The floors should be absolutely impervious to water and should be pitched to a drain so that it will be possible to get into the room with a hose and wash down every part of it. Sanitary drinking fountains are now being introduced in a good many mills, thus discarding the use of a common drinking cup or glass, for use of all the operatives. While it is often necessary to locate drinking fountains near the toilet rooms, they should not be placed in them, and a ventilated passageway in all possible cases should be placed between the toilet rooms and the main body of the mill.

After completing the design for buildings the mill engineer's next work is in planning a proper generation and distribution of power, and in this department perhaps more than any other, there has been more general disagreement as to the most economical method of transmission.

If power can be purchased from a power company at a price that will make it profitable to the consumer, there is of course no necessity for going to the expense of a power plant, and in estimating the cost of steam power there should always be taken into account the interest and depreciation on the cost of the plant as well as the amount of fuel required to operate it.

In a mill where steam must be used for dyeing in such a quantity that all of the exhaust from the engine can be utilized, there is no question about the ecenomy of installing a steam plant. In this case unquestionably, power can be produced and the exhaust steam can be used for all purposes connected with the dye house, with a very little more cost for fuel than would be necessary if no power were used and no power company could possibly afford to sell power as cheaply as it could be produced in this manner.

In the majority of mills, however the use for exhaust steam is very slight, and it is therefore necessary to use condensing engines and to get the economy to as high a point as possible without utilizing any of the latent heat of the steam after it has done its work in the engine. Sometimes the question of whether or not it is better to purchase power or to make it becomes a commercial question affected quite as much by the financial strength of the mill as by the relative economy of the two methods of securing power.

If a mill has sufficient capital to undertake the building of a steam plant without impairing its resources, then it is only fair to count the actual interest on the money invested, plus the depreciation, but as it sometimes happens it becomes necessary to decrease the amount of textile machinery which they might install in order to have funds available for a power plant, and it is then a question of how much return could be obtained from this money if it were invested in additional textile machinery.

It will at once be apparent that this is a question that each mill must settle for itself, and that no general rule can be laid down for the solution of it.

If it is decided that a power plant must be built, the next question to be determined is the method of transmission and in this question the writer has always believed that each individual case must be studied out for itself, and that both mechanical and electrical transmission has its advantages ,and that neither one nor the other is always the best thing.

In a small compact mill where the buildings practically comprise one unit, it is almost certain that the mechanical drive will be so very much cheaper, that any advantages gained by electrical transmission will be more than offset by the added cost. This is especially true in the group system of motors, for the reason that the speed regulation will be very little, if, any, better than with a properly designed mechanical transmission system, and the writer wishes to go on record here as saying the only advantage of electrical transmission is that a proper application of it may result in a more uniform speed in the various departments. From his experience, however, he would most unhesitatingly say that no saving in power can be accomplished by the use of electric distribution where the buildings are compact and with the group system of drive it is very questionable in his mind whether the average case will show any better results in speed regulation than can be obtained in a mechanically driven mill.

There are ,of course, a great many cases where a manufacturing plant consists of a number of buildings that must necessarily be scattered In this case, unequestionably, the electric drive is of great advantage and should be used.

The scope of this paper is too general to allow space for the exhaustive treatment of a proper design for a steam plant, nor is it possible to lay down a general rule as to the proper rule as to the proper class of apparatus to be selected.

There are, however, a few things which should be borne in mind in the selection of apparatus for power plants and which are also frequently disregarded.

In the selection of boilers, the size of the plant must necessarily be considered in fixing the number and size of units to be installed, but it should always be possible to lay off at least one boiler without stopping the plant or materially impairing its efficiency. Proper cleaning and care cannot be had without this, and although it is not commonly so regarded, in general any waste of fuel is more likely to be found in the boiler room than in the engine room. Small differences in the valve settings may slightly affect the economy of the engine, but the amount that can be saved by extra care of the engines may be thrown away ten times over by allowing the boilers to get dirty, or by not having proper draught.

The way the boiler is set also affects its efficiency to a very large degree, and this is in turn affected by the kind of fuel to be used.

If mechanical drive is used it will, of course, be necessary to install an engine, but with electrical transmission, it is very often a question of engines versus steam turbines, and here again the services of an expert are needed to determine which of the two is best adapted to the conditions. Each has its advantages and each is capable of good economy when properly installed.

It is best, however, not to consider steam turbines unless adequate condensing facilities are provided, for the reason that a steam turbine cannot give a high efficiency except with a good vacuum and as a general proposition it is not wise to install one unless the back pressure can be reduced to four inches which is equivalent to twenty-six inches vacuum referred to a barometer at thirty inches.

There are, of course ,many ways of installing condensing apparatus, to attain this result, but with a very small supply of fresh water and the consequently high temperature of the injection water, the cost of installing a condensing apparatus of sufficient size to give the necessary result, and the added cost of

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circulating sufficient water to get the desired vacuum, will, as a rule. more than offset the difference in first cost between the two types of machines.

After selecting the type of both boilers and engines, or turbines, as the case may be, they should be installed in such a way that there will be as little loss as possible in handling the steam from the boilers In a modern plant only high pressure pipe and fittings should be used and long bends should be installed in all main steam lines. All steam pipes should be properly proportioned in size for the amount of steam they carry, and should be thoroughly covered. All piping systems should be as simple as possible, but must at the same time be so installed that flexible operation can be secured. Heaters and feed pumps should be of ample size especially the latter.

The plant as a whole should be so arranged that care of the apparatus is easy, and no pumps, heaters, etc., should be plced in a dark place. The design and arrangement of a power plant is necessarily a very complex question and one which, unfortunately, has often been neglected. It should be constructed only by an expert who has an organization capable of handling every detailed question in connection with it, and who is able to take into account all of the conditions, both favorable, and unfavorable, that affect any type of apparatus under consideration. The power plant is, after all, the heart of the mill, and after being installed it is called upon to give hard and unremitting service, and whenever it stops everything must stop. The first consideration, therefore, is reliability, and after this economy. Fortunately, as a general proposition, the economical plant can be made the most reliable one, and is is not, therefore, necessary to sacrifice one point for the sake of gaining the other.

The steady load of a cotton mill is ideal for the economical development of power, but it should also be borne in mind that this steady load means running everything "at the top notch" all the time without any long shut downs during which repairs can be made. Therefore, all apparatus should be selected to give steady and uniform service and be capable of standing up under the load every day.

In buying apparatus it should always be remembered that what is economical in one plant ,under one set of conditions, may not be economical in another plant under entirely different set of conditions. and that these conditions may vary without the knowledge of the purchaser, unless he be an expert, which is not usually the case. Therefore, by all means the services of a high class engineer should be secured, and it would be surprising indeed, if he fails to save his fee a good many times over in the results which he is able to accomplish as against the man with only a general knowledge of the subject.

In order to determine accurately the difference in speed regulation between the various types of drive. there was recently conducted by the writer's office a series of tests in various mills, to determine the actual losses in daily operation by the various methods of transmission This series of tests comprises something over three thousand readings and were made in the mills of highest class of construction; therefore, the average results are probably better than would be found in many plants. Tests were made with carefully calibrated tachometers, except that some loom speds were taken by means of the stopwatch, reading the actual seconds for a given number of picks. These tests show only the variation in speed between the machines in the same department and at practically the same time. They do not show the day to day variations such as might be caused by the effects of change in humidity and temperature on the main driving ropes or belts, counters and machine belt or the change in speed of prime movers.

The per cent loss is figured in the following manner: The maximum speed is taken as the speed of the highest reading machines, not on some accidentally high reading, but on a maximum established by several machines. It is assumed that all machines should be theoretically run at this maximum speed. From this maximum speed is deducted the average speed of all the machines tested. The difference between the two readings divided by the maximum represents the loss in the room in per cent.

It will be seen by closely examining this test that the average variation in speed in the mills using large group motors in their spinning room, was practically as high as that found in the mechanically driven mill operating under about the same conditions. This is to be expected, as there are really no fewer belts in the one case than in the other, and the only extra transmission is the rope drive from the engine to the main shaft where the slip is very small and subject to practically no variation. It will be noted that the "Gour Frame Drive" for spinning shows a very much better average speed than either the mechanical or electrical group drive, and this is, of course, to be expected for the reason that there is only one belt between the motor and the frame.

It should be borne in mind that these tests were made in high class mills receiving careful attention, and do not represent really an average type. It can be safely stated that in many old mills with overloaded belts and very poor attention, the loss in speed may amount, on individual frames, or on even a large majority of the frames, to as much as ten per cent.

In one mill where tests were made by the mill people, and which

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Modern Mill Construction.

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were not of sufficient extent or accuracy to enable us to use in this paper, there were found in one spinning room individual frames running as low as 22 per cent under speed, and the average in the room, both warp and filling, was 8 per cent under speed. This is a mill built about twenty-five years ago and which has been added to from time to time without changing many of the main driving belts. It, of course represents an extreme but by no means unusual type, and attention is called to it to stress the necessity in designing a new plant of having sufficient belt capacity on all drives to reduce slippage to a minimum. There is no secret of cheap cost except high production and every minute that a machine runs under the speed at which it ought to operate, the cost is piling up and the number of yarns or pounds upon which the mill may make a profit is also reduced, and, therefore, the loss is not confined alone to the increase in cost of production.

The writer would unhesitatingly say that he believes there is not a single plant in the United States, unless it be driven with individual motors geared to each machine, that has not an average speed loss in all departments of more than 2 1-2 per cent, and he further believes that the greater part of this loss is in the weave room where it really does the most harm.

In the matter of lighting the mill there are several systems that may be employed, each of which has its adherents, and each of which has some special advantage. The system, however, in most general use today is high efficiency Tungsten lights set at some distance above the floor and provided with the proper kind of reflector, so that a general illumination may be provided over the entire room. The lighting system should be divided into circuits, so that those parts in the mill that are darkest, may be lighted in advance of the others. It is, therefore, usual to provide three circuits in each main room, divided through the length of the mill. This gives one circuit on each side of the room nearest the windows, and one in the center, as on many dark days artificial light may be needed in the center of the room, and not on the sides. This method enables the proper light to be maintained without having to burn all the lamps in the room.

Proper care should be taken not only to so arrange the wiring that a uniform voltage shall be maintained at all lamps, but the lamps themselves should be purchased for the exact voltage at which they are to be used. or example: If a 115-volt lamp is put on a 110-volt circuit it will not give its full candle-power, whereas, if a 110-volt lamp is put on a 115-volt circuit, its life will be very materially shortened. This, however, is a matter which is more commonly neglected than attended to, and as a consequence many mills fail to get any decent results from their lighting system and are only content to let the matter go on as it has been, because they do not know better.

In the matter of heating and moistening, there are so many systems that the writer prefers to pass this question over as briefly as possible, since he does not wish to show partiality for or against any particular system. He would, however, stress the point that both the heating and moistening systems should not only be adequate under normal conditions, but should have sufficient capacity to give the proper results under the most extreme conditions. Unfortunately, many mills are content to start out with a cold room in the morning, provided they can get it warm by nine o'colck, and do not stop to think and take into account the loss of production which this entails. The mill should not only be at the proper temperature at the starting hour, but should be maintained at this temperature with reasonable accuracy during the entire runing time and to obtain this result there must be ample radiation, whether heating is done by steam coils in the mills or by the fan system. In all cases, if the radiation is sufficient it will be found economical to use a vacuum pump on the return, and to do the heating at low pressure. Moistening systems should not only be ample in size, but should be so arranged as to secure proper distribution.

In a recent test made for humidity in a mill that was having trouble with kinky filling, it was found that the relative humidity of the spinning room under severe conditions could not be brought above 26 per cent, notwithstanding the fact that the management were quite sure that the deficiency in humidity, if any, amounted to very little. The humidfier system has been completely overhauled, and, in fact, entirely renewed since that time ,and there has been no difficulty with kinky filling, and the actual output of the room has increased over 5 per cent. Possibly some of this may have been due to regain in weight in the yarn, but part of it was due to the ability to reduce twist on the spinning frame, and thereby increase the front roll speed. It has been customary in the past to sell humidifiers on guarantee to produce a certain humidity in each department, with certain temperatures in the room, and with all the windows closed, and it is doubtful if one mill in ten makes any test after letting the contract.

It is a well known fact that it is almost impossible to keep the windows closed in certain seasons of the year when the humidity is lowest, and therefore while technically the guarantee has been filled, the amount of humidity is not sufficient for proper operation. A great many buyers also are governed entirely by the price made on an installation without any checking up of the number of gallons of water evaporated by the system. Therefore, it may easily happen one firm may be putting in a system of very much smaller capacity than another, and for that reason is able to make what is apparently a better price, where-

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VAT COLORS
Ciba Violet Ciba Blue Ciba Red
Ciba Yellow Ciba Green Ciba Grey
Synthetic Indigo

All kinds of Sulphur Direct and Basic Colors for Cotton.
Zinc Dust, Bi-Sulphite of Soda, Sodium
Sulfide, Caustic Soda.

All kinds Sizing and Finishing Materials, Potato Starch, Dextrine, etc.

Rainproof Fabrics

THROUGH impermeable rubber coatings waterproof stuffs have a considerable variety of applications; canvas for automobile tires, gauze for surgical purposes, and light tissues for balloons are prepared with the aid of rubber mixtures.

The process formerly employed consisted in simply rolling out a thin sheet of rubber between two tissues. These are now prepared by spreading over their surface a simi-fluid coating of rubber solution in benzine, the dissolvent then being evaporated by the action of heat. Both sides of the material are then coated with a thick solution of gum, so that the tissue may be only superficially penetrated. Paraffin is also frequently added to rubber solutions.

Another kind of rubber preparation which has been revived since development in the construction of dirigibles is that of tissues. At present these tissues are finished after manufacturing by the addition of several coats of varnish and covered over with a final coating of olive oil, which gives more suppleness to the finishing. There is also a tendency to substitute for the varnishing process multiple tissues of remarkable tightness obtained by the superposing of a sheet of rubber about one-twenty-fifth of an inch in thickness rolled out between two pieces of cotton disposed diagonally; the tissue then receives a coating of drying oils; castor oil may take the place of linseed oil. Gutta and rubber are the most frequently used in combination with drying oils.

Paraffin embodies a mass of properties which are particularly adapted to the impermeability of fabrics; as a greasy substance it is absolutely impervious to water—is not even dampened by it. It is most generally used dissolved in benzine, corbon disulphide, petroleum essence, etc.; a little vaseline, rubber or castor oil is always added to render the preparation more supple. It has been shown that paraffin heated to 212 deg. of 220 deg. F. will dissolve its weight in gutta.

There exists a certain number of complex processes in which the tissue is submitted to different treatments in succession, the effect of which is thus considerably heightened. As to the various means of the preparation and coatings, the best method is that employed in labatories which gives comparative results. The materials are put together to as to form a vertical bag of great height, and water is introduced into the interior of the bag, passing successively from 12 to 36 water-tight pressions. If the material resists a pressure of 11.81 inches for several pressions, the impermeability is considered complete.

While the aplication of the impermeable coatings creates a perfectly water-tight lining in the substance of the tissue itself, the waterproof fininshing of the fabric simply consists in saturating the fibres with impermeable matter, so the raindrops are arrested ere they can penetrate the capillar interstices of the fibrous mass. The most generally used waterproof preparations are those with a base of aluminous compounds, the principal of which is tannate of alumine. Preparations with a base of copper soap are frequently employed.

A perfectly waterproof preparation, although not impervious to the air, is obtainable by the use of casein, soap and lime. Silk fabrics are often rendered waterproof by gelatin obtained by aluminous soap. It has been tried but without success, to make waterproof preparations with gum arabic as a base veneered with an aquenous solution, impermeability being obtained by a bath of acetic acid. For cellulose waterproof products compounds of cellulose and niter are more generally employed, as they are more easily dissolved than cellulose.

In mixing with a base of aluminous soap the tissues are plunged several times into a solution of alum and soap, and an aluminous soap being thus formed which stops up the pores of the tissue. The various methods differ only in detail. Many manufacturers prefer aluminum soap to soluble soaps. After disiccation the substance should be dissolved in essence of turpentine. Yolk (oil from sheep's wool) is preferred to ordinary grease for the formation of oluminous soap.

With acetate of alumine preparation, instead of decomposing the acetate saturating the tissues with soap, the texture may be dried; the active element is evidently less solidly fixed than if it were formed in the insoulable state on the fibre itself. But the cost of this process is very high.

Although less frequently employed in industry, the preparations of tannate of alumine are much more imprevious to damp; they equal copper preparations. The best-known process now consists in coating the fabric with insoluble copper or with many of its insoluble compounds, but aluminum and copper are preferred to other bases because of their efficiency cheapness and easy application.—Consular Reports.

The Knitting Trade Directory.

The Lord & Nagle Co., publishers, of Boston, has just issued the 1912 edition of the American Directory of the Knitting Trade in the United States and Canada, this being the 30th year of this publication. The directory is of value to manufacturers, jobbers, commission houses and retail dealers buying direct, as well as kindred interests selling the hosiery and knit goods manufacturing trade.

His Standing.

"You see that man at the door? Well, he is a nitrate king."

"What are you talking about? He is a cabman."

"Exactly. That's where his night rate kingship comes in."—Ex.

DIXON LUBRICATING SADDLE CO.
BRISTOL, R. I.
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PROVIDENCE, R. I.

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Whitinsville Spinning Ring Co.
Whitinsville, Mass.

Best for *Machine Drawing.*
Our loom harnesses are particularly well adapted for machine drawing. The eyes are well opened, are in perfect alignment and stand square. They are uniform in size, are smoothly finished and possess every requirement for perfect machine drawing. We equip the harnesses with spacers if desired.
Many of the largest Textile Mills are using our Loom Harnesses.
Garland Mfg. Co., Saco, Maine
G TRADE MARK

Grading, Opening and Mixing

Contributed Exclusively to Southern Textile Bulletin by W. P. Hurt

THE object of every carder is to produce a smooth, round, evenly twisted roving, that will produce a yarn with as little variation as possible. If the grading and mixing are properly done and the machines throughout the entire process properly set to suit the fibers, the yarn will not vary more than one number in the regular daily sizing. And the warps will not vary more than one pound in weight under any conditions.

We will divide this series of articles as follows: (1) Grading, Opening and Mixing (2) Lappers (3) Cards (4) Drawing and (5(Fly Frames in two, three and four processes, first giving the practical side and later the theory of each machine.

Grading.

No carder can keep his numbers with a minimum variation and have each and every warp weigh the same unless he is familiar with grading cotton. We know that the average carder knows more about cotton and the results gotten from its use than the office force who buys the cotton, or the dealer who places it on the market. Those who buy cannot properly estimate the amount of short staple and motes that will be lost in the picking and carding. As some one has said, these processes will tell the truth, when properly set, and the buyer finds that his judgment was wrong. The cotton sometimes contains more short fiber and refuse than was estimated and the mill must suffer the loss. And where the management has no practical knowledge of manufacturing, the superintendent and overseers get credit for making a lot of waste for which they are not responsible.

The carder must select as many bales of cotton as possible to open in one mixing. See that every bale has practically the same quality of staple. If we find several bales containing more short fiber than the average, they should be mixed in regularly at each mixing and do not have one mixing with more bales containing the short and cut fiber than another. To determine the quality of staple requires considerable practice in "pulling" or drawing the cotton between the thumb and forefinger, and noting the amount of short fiber, motes, etc., which come from a good sample on each side of the bale. Coarse, heavy fiber will not spin well with fine silky fiber. Such mixing causes what we term "hairy" yarn. Such yarn has the ends of the fiber projecting from it to such an extent that sizing will not keep it from being knocked off, it clogs the headles and causes unnecessary breaks in the warp and causes very dirty looms and floor. In fact, the result of such mixing can be traced entirely through the mill building by noting the extra amount of flyings and dust settling on the machines at each process.

We will consider only the greatest bulk from the length of staple in each bale, as any practical man is aware that all cotton passing through a saw gin has more or less short fiber, most of which is lost in strips, fly and warps. If regular numbers and good running work is expected do not use cotton with the staple varying more than 1-16 per inch from a standard. Every variation of more than 1-16 an inch in the length of the cotton will cause the yarn to vary about one number. I mention this to show the importance of selecting stock for mixing. Again, the grades have much to do with keeping numbers and good running work.

Suppose we are to use a strict good middling cotton. And the buyer finds it to his interest to put in all grades down to middling. It would be to his interest to resell the middling and use only three grades, viz: strict middling, good middling, and strict good middling. Put the same number of bales from each grade in every day's mixing. They should be in regular order, using as few bales of the lower grades as the condition will permit with each mixing.

After selecting and grading, the bales should be placed in position and as many opened at one as possible. If the cotton is thrown onto the opening hopper, or into a bin, only small amounts should be taken from the bales in regular order and thoroughly shaken up. It is better to have two bins convenient and use from one while the other is being filled and thus get the benefit of about twenty-four or more hours conditioning.

Taking care of bagging and ties come in order with every mixing. Have the lint picked from the bagging and the bagging, with ties from each bale, weighed, keeping account of the weight of each mark. The law allows 22 pounds excess on bales which have not been compressed and 24 pounds on those which have been compressed. When the excess is more than the law allows report it to the office and put in a claim. In many places where this system has been adopted from one to five thousand dollars have been saved for the company annually.

Second hand bagging and ties cost the ginner about fifty cents per bale. They sell to the farmer for 100 per cent profit, putting in as many patched places and double pieces as he thinks the manufacturer will buy without a kick. The only way to put a stop to such trickery is to put in a claim for every pound of excess.

Selecting cotton for dyeing requires as much skill as for regular mixing. To get good results the carder should have some knowledge of the action of chemicals on the fiber. Any ordinary dye stuff will reduce the length of the fiber about 1-16 of an inch. "Bleached," and all shades with bleach bottom will reduce the fiber from 1-8 to 3-16 of an inch, the latter having a tendency to weaken the fibers. It is essential to good running work to select the best stock for the most severe chemicals.

The standard high pressue and vacuum dyeing machine will hold 700 to 1,000 pounds of cotton each batch, with very little chance for a good bixing after it leaves the dyer. But the bales must be opened and the fibers allowed to condition itself or bad work will be the result.

If you are bothered with static electricity have the dyer use plenty of common or glauber salt. Open the bales and sprinkle the cotton with a solution of one point of glauber salt to two gallons of water, using about one gallon of the mixture to two hundred pounds of cotton and let stand for twelve hours before using.

In the Cotton Belt.

In the weekly review of the weather and the crops, The New Orleans Picayune says the past week has developed considerable rain in the cotton belt, although the showers have not been heavy except near the coast. Despite the moisture good progress has been made in field work and in planting, and, although the crop is late in most sections, the cotton already planted is showing up fairly well. What is now needed is fair warm weather, and the indications point to more favorable conditions in the immediate future. Texas, where conditions have heretofore been almost ideal, has recently complained of too much rain and cooler weather than is seasonable, which may make considerable replanting necessary. The floods in the rivers and crevasses which have occurred have largely absorbed popular attention during the past week. Considerable cotton lands have either been already overflowed or are certain to be covered with water in the near future. These overflowed lands do not produce any very large proportion of the crop and if past experience is to serve as a guide most, if not all of these lands, can be planted in cotton after the flood waters subside.

Mother came with slow and silent step from the sick room and said to little Robert, "Your little baby brother is very ill, Robert, dear, and I am afraid he will die."

"Well, mamma, if he does die he won't go to the bad place."

"Why, Robert, what makes you say that?"

"Oh, I know! You see, he can't, mamma, 'cause he ain't got no teeth to gnash!"—Exchange.

W. H. BIGELOW
AGENTS FOR
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DISCUSSIONS BY PRACTICAL MEN

Size of Rings.

Editor.

I am interested in a proposed new mill which is to make 10s hosiery yarn and I have read much recently in regard to the tendency to use larger rings and wide guage on spinning.

I would like to have the ideas of your readers on the question of the best size ring, best length traverse and best guage for making 10s hosiery yarn. I hope that a great many will answer this question.

Enquirer.

Sizing Compound.

Arabol Gum G, one of the staples of The Arabol Mfg. Co., New York, when used in its pure state gixes excellent results in light or heavy sizing of cotton warps and is especially recommended for use on export goods, such as China shirtings, drills, denims, coarse or medium goods, etc. Mixed with starch it gives it more volume and adhesive power and adds elasticity and tensible strength.

Concave and Convex.

Editor.

I noticed some interesting articles on your discussion page recently relative to the object of the differential on a roving frame and incidentally the remarks relative to the work performed by the cones.

I notice that in building cones for roving frames they are not made straight but one cone is concave and the other one is convex.

Of course there is a good reason for this but I do not know it and I believe there are many of your readers who are likewise ignorant upon this subject.

If some one will explain the reasson for making the cones concave and convex it will be interesting.

Young Carder.

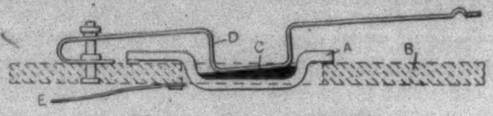
Soap Recipes.

For a good fulling soap, take eight pounds of powdered caustic soda and four pounds of caustic potash and make a lye out of it with 20 gallons of British standard—200 pounds of water. Now melt 72 pounds of tallow and when the lye cools to about degrees F., pour it into the tallow in a small, steady stream, stirring well all the time until all the lye has been added. Let it stand well covered up, for about a week, and you will find that a good hard soap will be the result.

A good soap for scouring and fulling is made up as follows: Take 112 pounds of red oil, put tht entire amount into a kettle and heat to 80 degrees F. Then run into the oil while constantly stirring it, five gallons of caustic potash at 62 degrees Tw., and let the solution stand over night. The soap will then be found ready for use.—Fibre and Fabric.

Improved Loom Swell.

One of the most important of the problems that are met with in weaving is that connected with the checking the shuttle, especially in regard to high-speed narrow looms. The effect of a fast-moving body like a shuttle, which travels at a high velocity across the loom race, being suddenly brought to rest in the opposite shuttle-box, is well known amongst those engaged in the weaving industry. And the disastrous effects that occasionally occur in connection with broken cops, etc.; the high rate of wear and tear that is continually acting in connection with the shuttle and the picker; and the render the problem of shuttle check- wasted power that is inevitable, all ing one of continual interest.



Improved Loom Swell.

A device, however, is illustrated herewith which is claimed to prevent successfully many of the evils now encountered. As shown in the illustration, the swell A is of the usual type, but instead of being hinged in the shuttle-box back B it is allowed some freedom of movement in the direction of the travel of the shuttle. A wedge C is provided at the back of the swell. This wedge is held in position laterally by a spring D fixed to the box back at one end, and the other end resting against the slay-sword. As a result, when the swell is carried along by the friction of the incoming shuttle, a gradually increasing hold is produced on that body, and it is brought to rest without damage to the picker.

On the return journey the shuttle carries the swell with it for a short distance, and during this time the pressure on the side of the shuttle is gradually reduced so that an easy pick is obtained. In consequence it is stated to be possible to dispense largely with the leather checking and bumping straps, which are a costly feature, both originally and in subsequent care and upkeep. The only check necessary is said to be the light spring E which arrests the picker in its proper position.

The device, which is stated to be in successful operation in a number of North-east Lancashire mills, is claimed to operate successfully on looms which have previously given trouble with stitching, shuttles rebounding, etc. It is also claimed to maintain a perfectly even bevel on the shuttle, and it operates with a much longer picking band than is usual, or, what amounts to the same thing, the picking stick may be set back. The blow of the shuttle on the picker is also reduced, and the life of the picker is thus lengthened. Cop breaking is also prevented by the gradual checking, and the power expended in picking is also reduced. —Textile Manufacturer of Manchester, Eng.

Kill the Flies.

The effect of the fly upon the health of mill people is beginning to be recognized and the following rules issued by the National Health Association will be found valuable:

Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.

Do not allow decaying material of any sort to accumulate on or near by your premises.

All refuse which tends in any way to fermentation, such as bedding, straw, paper, waste and vegetable matter, should be disposed of or covered with lime or kerosene oil.

Screen all receptacles for garbage carefully covered and the cans clean- or sprinkled with oil or lime.

Keep all stable manure in vault or pit, screened or sprinkled with lime, oil or other cheap preparations, such as are sold by a number of reliable manufacturers.

See that your sewerage system is in good order; that it does not leak, is up-to-date and not exposed to flies.

Pour kerosene into the drains.

Burn or bury all table refuse.

Screen all windows and doors, especially in the kitchen and dining room.

If you see flies, you may be sure that their breeding place is in near by filth. It may be behind the door, under the table or in the cuspidor.

If there is no dirt and filth there will be no flies.

Textile Manufactures in Georgia.

The Census Bureau, Washington, D. C., in its reports on manufactures in Georgia, says: The combined value of the textile manufactures, including cotton goods, and woolen and worsted goods amounted to $52,141,000, or 25.7 per cent of the total value of all manufactured products of the state in 1909.

In London the saloons are open on Sundays between the hours of 3 and 5 in the afternoon. A couple of roughs were standing in front of one of these accommodations waiting waiting for it to open when a Salvation Army captain wso was passing said:

"Men, don't you know that when you enter a saloon you enter hell?"

"That's all right, old top," piped one of the roughs, "they'll throw us out in a couple of hours."—Ex.

Superintendents and Overseers

Dacotah Mill.

Lexington, N. C.

A. L. Pickard	Superintendent
C. A. Shuford	Carder
A. L. Agner	Weaver

Amazon Mill.

Thomasville, N. C.

O. L. Wagstaff	Superintendent
J. W. Bost	Carder
W. R. Ennis, Jr	Spinner
L. W. Hansell	Master Mechanic

Vance Cotton Mill.

Salisbury, N. C.

E. B. Neave	Superintendent
H. M. Hoffman	Carder
John Farrington	Spinner
F. M. Cooper	Master Mechanic

Newton Cotton Mill.

Newton, N. C.

W. E. Bacon	Superintendent
J. T. Honeycutt	Carder & Spinner
M. C. Sides	Weaver
S. Grant Smith	Slashing

Jewell Cotton Mill.

Thomasville, N. C.

C. H. Boyd	Superintendent
Z. G. Holtzclaw	Carder
W. P. Bennick	Spinner
W. H. Bailey	Master Mechanic

Salisbury Cotton Mills.

Salisbury, N. C.

W. A. Fowler	Superintendent
H. K. Roberts	Carder
E. M. Hislop	Spinner
E. B. Melton	Weaver
J. Armstrong	Cloth Room
G. O. Klutz	Dyer
J. H. Williams	Master Mechanic

Statesville Cotton Mill.

Statesville, N. C.

J. R. Frnech	Superintendent
S. L. Abernathy	Carder
T. E. Adams	Spinner
C. L. Wyckoff	Weaver
W. D. Christopher	Rope Dept.
E. E. Monday	Master Mechanic

TIGHT BINDING

Modern Mill Construction.

(Continued from Page 6)

as, if compared on the proper basis it would be really higher. It is the writer's practice to make each bidder specify exactly the number of gallons of water per hour which his system will evaporate so that an exact comparison of capacities can be made.

In presenting any general article upon a subject so broad as that given for the title of this paper, the author must necessarily turn toward some concrete example of the subject he seeks to illustrate, and to point out in this example the various steps that have been taken and the precautions that have been observed to accomplish the desired end. The writer therefore, desires to apologize for a lengthy description of the Dunean Mills at Greenville, S. C., which has recently been designed in his office, and which represents a splendid type of modern mill construction.

In every department of the construction or equipment of any manufacturing enterprise there must be considered at all times ,the commercial practicability and advisability of each item which is to be purchased. In other words ,in a manufacturing plant no expense which does not lead to a dividend either directly or indirectly can be justified, and it is with this fixed idea in view that the Dunean Mills have been constructed.

This plant is located about 1 1-2 miles southwest of Greenville, S. C., and is equipped for the manufacture of fine fancy dress goods. It has 50,320 ring spindles and 1,200 looms, of which part are Jacquard and the balance 20 harness dobbies. It is electrically driven by current purchased from the Southern Power Company.

The site is a peculiarly favorable one and splendidly adapted to convenient arrangement and economical construction of buildings. It is on a high plateau the top of which is nearly level, there being only enough slope to give the proper drainage.

The general arrangement of the mill is as follows:

Carding and spinning is in the main building, 471 ft. 8 in. long by 130 ft. wide, two stories high. One hundred feet west of this and parallel to it, is the weave shed, which consists of one-story building 403 ft. 4 in. long by 209 ft. wide, lighted both by windows on all sides and from nineteen saw-tooth skylights in the roof, each running entirely across the building. There is a basement in the weave shed of sufficient height to enable proper inspection of the wiring to be made, but there is no shafting in this basement. At the north end of the weave shed and twenty-five feet distant from it, is a two-story cloth room building, the first floor of which is on a level with the weave room floor, and in which is located the stitching, brushing and shearing machines. These occupy only a small portion of space, the balance being devoted to storage.

The construction of this mill is unique in that while all floors carrying machinery are of the most rigid of 3 in. square plank and a 7-8 in. type, the favorable conditions of the site have been utilized in such a way as to keep the cost of the building very close to that of the conventional type.

The first floor of the main building rests on 4 1-2 inches of tar concrete, on which is placed one layer maple top flooring. At the north end of the building the first floor is of reinforced concrete, under which is the dust room and machine shop.

The entire second floor of the main mill which carries the picking and carding, is reinforced concrete. This floor has been tested with a load of 400 pounds per square foot and shows a maximum deflection under that load of 1-4 in. at the center of the spans. Inasmuch as the load in actual practice will probably not exceed 80 pounds per square foot, it will be seen that there will be practically no sag under normal load, and that whatever deflection exists will be a permanent one.

The roof on the main building is of the conventional mill construction type with wooden beams and a 3-in. roof plank.

The arches ordinarily used over the top story windows are omitted and the window frames are carried to the under side of the roof plank. The light in this room is further increased by a monitor 25 ft. wide by 5 ft. high running practically the full length of the building.

The weave shed floor is carried on on hard pine beams covered with 4 in. plank, 1 in. of intermediate flooring, and 7-8 in. maple top flooring. Intermediate piers are used under the floor timbers in the weave shed, thus reducing the deflection of the floor timbers to about one-fourth the usual amount.

The cloth room building is of mill construction type and inasmuch as all heavy loads are carried on the bottom floor of this building it was possible to reinforce this floor as was done in the weave shed, with very little expense.

The warehouse is the regular standard type of two-story building arranged to store one bale on end in each story. All platforms at this warehouse are of reinforced concrete, as are all outside steps and platforms on the mill buildings.

Next to the warehouse is located a brick opening room in which through an opener to the picker room.

Next to the warehouse is located a brick opening room in which all cotton is opened and fed through an opener to the picker room.

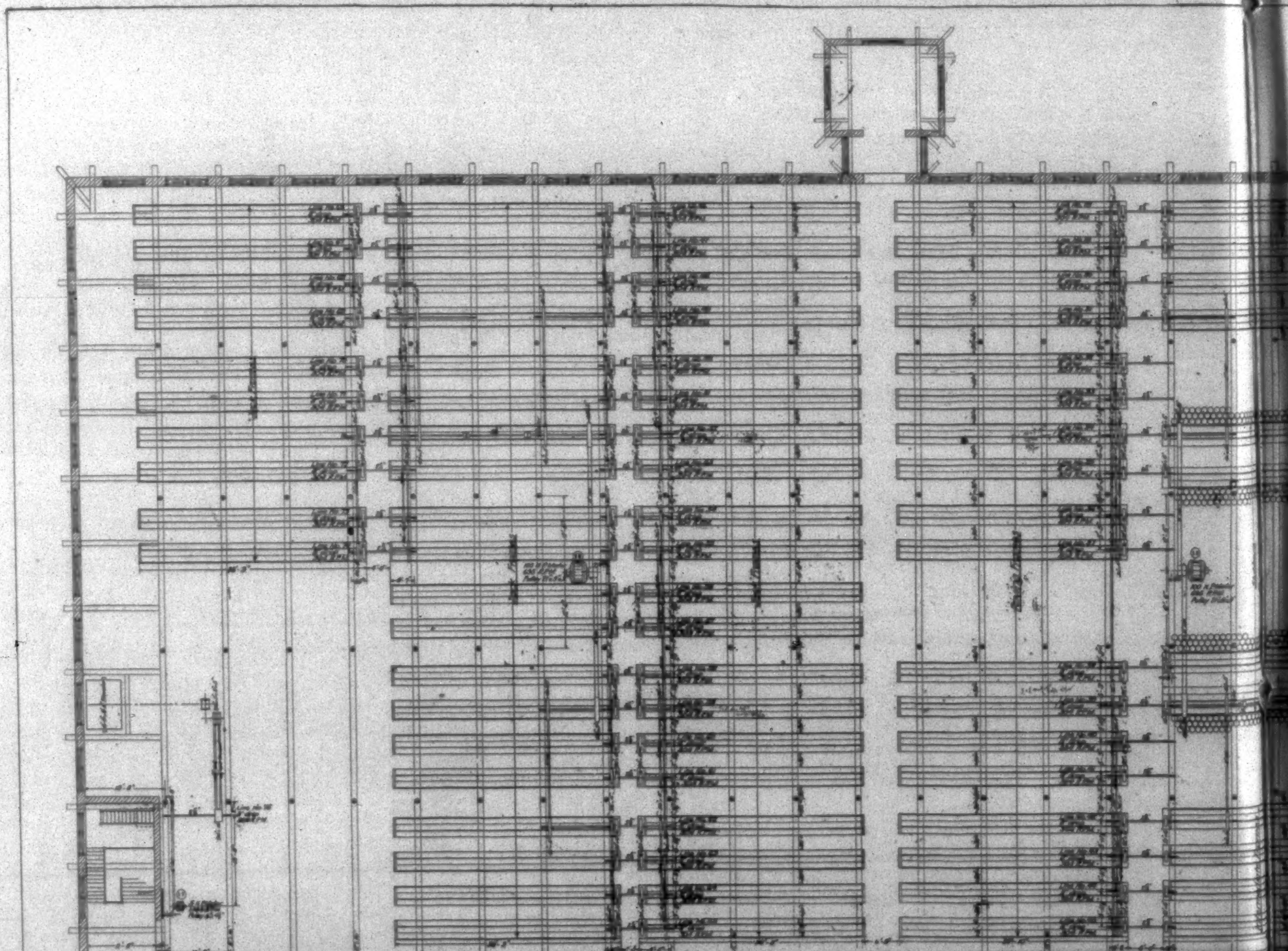
The writer claims no special feature of construction in this mill, that has not been used before, but he believes that the combination of the various types has produced all that could be desired in the way of results and with a minimum of cost. Notwithstanding the fact that the character of the work in this building is of the very best, the total contract prices of the main building, including the main mill, weave room, cloth room and boiler house, amounted to only 81 cents per square foot of usable floor surface, which he thinks will compare very favorably with buildings of the conventional type and of a similar arrangement.

In the transmission of power this mill is unique in that so far as the writer knows, no cotton cloth mill in the United States has ever gone so far with the application of individual motors to textile machinery.

Not only are the pickers and spinning frames equipped with individual motors, but each loom has its own motor as well.

The group drive was used in the card room for the reason that special motors have not been as yet developed for card room machinery, and the application of small motors in this room would be of doubtful value and subject to too much expense to warrant their use.

Before determining on the use of individual loom motors, forty of them were installed in the Watts Mills at Laurens, which is on fine nainsook cloth, and which is under the same management as the Dunean Mills. The results there show


30 - 200 sp. Jack Frames, 6 x 2½"; 4¼" ga. Pulleys 16 x 2½" T & L @ 456 R.P.M.
4 - 80 sp. Slubbers, 11 x 5½"; 9" ga. Pulleys 16 x 2½" T & L @
8 - 108 sp. Intermediate Frames, 9 x 4½"; 7" ga. Pulleys 16 x 2½" T & L @ 399 R.P.M.
18 - 160 sp. Roving Frames, 7 x 3½"; 5¼" ga. Pulleys 16 x 2½" T & L @ 418 R.P.M.

conclusively that the loom production was increased about 2 1-2 per cent, and that the quality was much better, due to the fact that the uniform speed gave a more accurate spacing of the cloth threads, which on a belted loom varies considerably.

In laying out the plans it was the endeavor to have every part of the electrical equipment and not only standardized, as far as possible, but also to make it of the most permanent character, and in order to do this all of the main wiring is carried in tunnels underneath the floor, which tunnels are accessible from the outside of the buildings and are large enough to allow inspection and repairs. All of the interior wiring is carried in iron conduits, including the lighting wiring.

Power is received from the Southern Power Company at 13,000 volts, and is stepped down in an outside fireproof transformer house to 230 volts, at which pressure distribution is made. This voltage was determined on because of the fact that the electrical and mechanical characteristics of the low voltage motor are better than that of the high, and also because of the fact that the motors are better developed in the small sizes. The writer pauses here to say that no standard motor in small sizes should be used for textile work, as it requires a special treatment, and, therefore the purchaser should get a motor specially developed for the service which it is required to give.

Inasmuch as this paper is intended to be generally descriptive, and not a treatise on electrical apparatus, no detailed description will be given of the various motors, except to say that all of them are conservatively rated and are built especially for textile service.

It may be interesting to give a general description of the course of the product through the plant, since it illustrates the point previously made that the work in a modern mill should progress continuously in one direction as far as possible.

Cotton is delivered from an opening room at the warehouse through a 14 in. galvanized iron pipe to the picker room, which is on the second floor at the north end of the main mill. The laps pass from the pickers directly through the cards drawing, slubbers and roving machinery, moving southward and finish in the form of fine roving at the south end of the mill. From this point the roving drops one story to the spinning room, which is located n the bottom floor, the filling spinning being on the west side and the warp on the east. The elevator at the end of the mill handles loads only in one direction and comes back with empty bobbins. The warp yarn is carried to the north end of the mill through the spoolers and warpers which are at that end of the mill and from the warpers goes through a passageway to the slasher room and tieing-in room, which is in the north end of the weave shed. The filling yarn goes through a passageway located about the middle of the length of the mill to a conditioning room on the east side of the weave room and about the middle of its length. From this conditioning room the yarn is carried directly into the weave room coming, as stated before, just about the center of its length. Finished cloth is carried through a short passageway to the stitchers, brushers and shearing machines, which are located on the first floor of the cloth room. From these machines the cloth passes up through the floor over rollers, without handling, to the inspecting machines and folders. This cloth room building is 50 ft. by 209 ft. and is specially well lighted. The brushers and shearing machines being located on the floor below, there is absolutely no dust or lint in the room where the cloth is finally inspected and baled, nor is there any shafting that could possibly throw oil on the goods. From the cloth room goods are loaded from a loading platform on the north side of the building.

From the above it will be seen, clearly, that there is no crossing of this work, nor any handling that is not absolutely necessary, from the time the cotton is opened until the goods are packed in the car.

The construction and equipment of this plant was done by the following parties:

Building Contractors—Fiske-Carter Construction Company, Worcester, Mass. and Greenville, S. C.

Pickers—Kitson Machine Shop.
Cards, Drawings, Roving and Spinning—Saco-Pettee Company.
Combers—Whitin Machine Works.
Spoolers—Saco-Pettee Company.
Warpers—Lowell Machine Shop.
Twisters and Slashers—Lowell Machine Shop.

Looms—Crompton-Knowles Loom Works.

Cloth Room Machinery—Curtis & Marble.

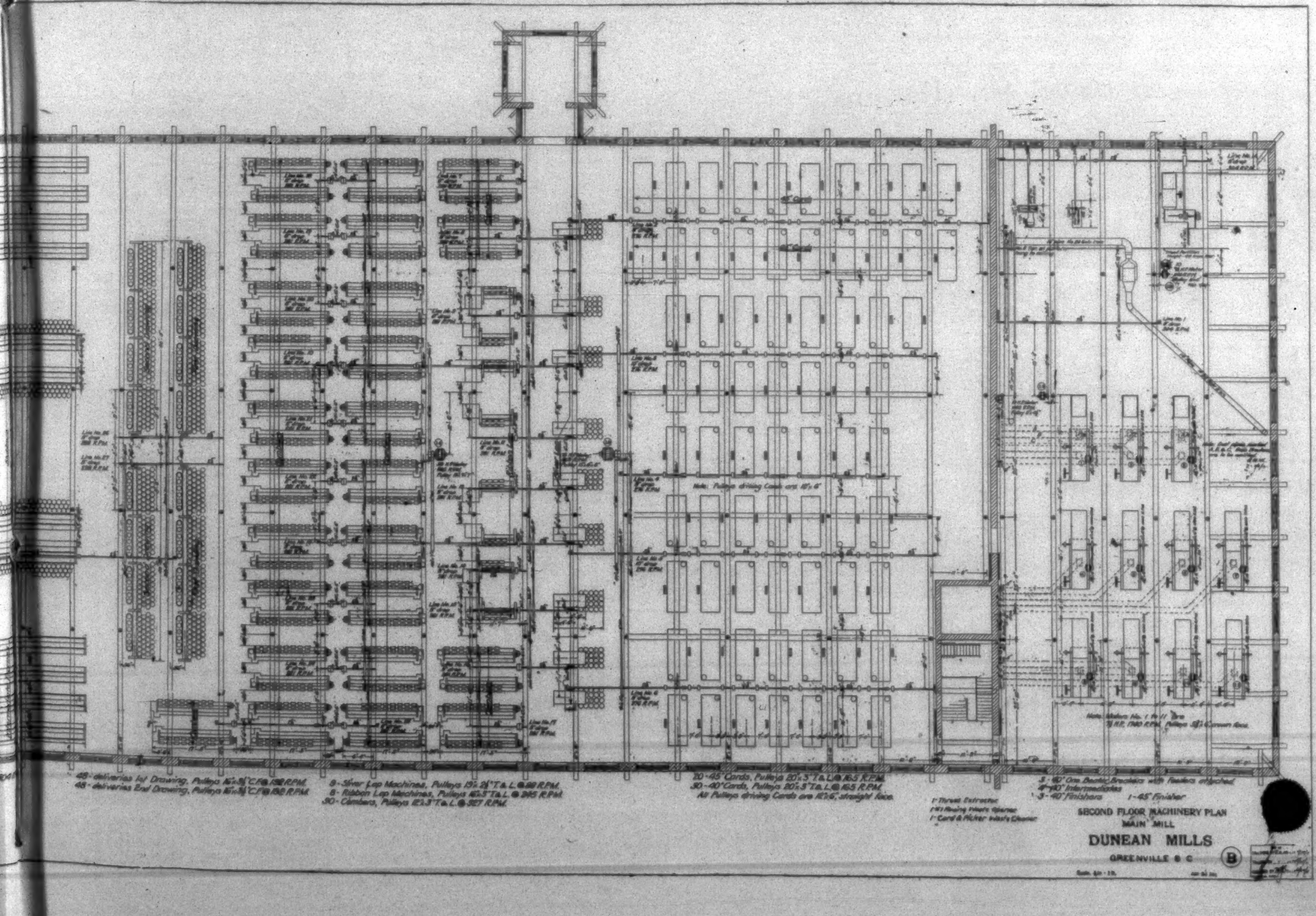
Fire Protection and Heating—General Fire Extinguisher Co.

Electrical Machinery—Gen. Electric Company.

Humidifiers and Regulators—Stuart W. Cramer.

Shafting—Jones & Laughlin.

Before closing this paper the writer desires to express his thanks to Mr. J. Adger Smyth, Jr., president and treasurer of the Dunean Mills, for permission to reproduce the machinery plans and also for his intelligent appreciation of the writer's efforts to make the plant an efficient one, which he has been so ably assisted by the management.


48 - deliveries 1st Drawing, Pulleys 16 x 3½" C.F. @ 198 R.P.M.
48 - deliveries 2nd Drawing, Pulleys 16 x 3½" C.F. @ 198 R.P.M.
9 - Sliver Lap Machines, Pulleys 19 x 2⅞" T. & L. @ 88 R.P.M.
8 - Ribbon Lap Machines, Pulleys 16 x 3" T. & L. @ 245 R.P.M.
30 - Combers, Pulleys 12 x 3" T. & L. @ 327 R.P.M.
20 - 45" Cards, Pulleys 20 x 3" T. & L. @ 165 R.P.M.
30 - 40" Cards, Pulleys 20 x 3" T. & L. @ 165 R.P.M.
All Pulleys driving Cards are 12 x 6, straight face.
1 - Thread Extractor
1 - Roving Waste Opener
1 - Card & Picker Waste Cleaner
3 - 40" One Beater Breakers with Feeders attached
4 - 40" Intermediates
3 - 40" Finishers
1 - 45" Finisher
SECOND FLOOR MACHINERY PLAN
MAIN MILL
DUNEAN MILLS
GREENVILLE S C
B

SOUTHERN
TEXTILE BULLETIN

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THURSDAY, APRIL 18

Female Apparel.

"There she goes, there she goes,
All dressed up in her Sunday clothes,
Nobody knows, nobody knows,
Whether she wears any under-
clothes."

The above poetic effusion in the Easter number of Judge would indicate that at least one contributor to that publication still has doubts about the amount of apparel required by the female of the species.

According to many authorities the late depression in the cotton manufacturing industry was caused by the scantiness of female apparel as prescribed by the fashion of the past two years, and so scanty was the clothing of those who dressed in extreme fashion that only the shady side of the street could be used by them on account of the transparency caused by the sun light. As the demand of cotton goods has shown a radical change and the amount that is being purchased is very large, it is logical to believe that more garments are now being worn and that the poem above, however true for last year, is now out of date.

After Us Again.

The following is a dispatch sent out from Washington, D. C., last week:

"Two representatives of the bureau of labor, Tilden and Blake, are to be sent to North Carolina to look into labor and wage conditions in the cotton mills. It is feared by some of the Democratic Congressmen that politics is at the bottom of this move. They are warning the mill owners not to give out any information they do not care to, as the law cannot compel it."

Just why we need investigating at this time is not stated and we doubt if the Bureau of Labor ever had a good cause for any investigation that has been made.

Moreover, we do not think that there is an over supply of brains connected with the Bureau in any capacity and those who have been selected to investigate us in the past have been theorists who showed a wonderful ignorance of the task which they set out to perform.

Daisy Worthington Worcester, who made the last report, did not like corn bread and our mill people were held up to the world as objects of pity because they feasted upon bread made from corn instead of from wheat. We have always wanted to ask Daisy what menu she would prescribe for us in order that we might merit her approval. We have never heard of the above mentioned Tilden and Blake and we doubt if either of them have ever been near a cotton mill. Before long their "expert" opinion of our mill people will be sent out from Washington by wire to all the yellow press of the country and the Southern textile industry must suffer thereby.

We are no advocates of violence but we would have no regrets of a few of the agents of the Bureau of Labor were given a mild bath in a mill pond and sent back to Washington.

The Southern mills have nothing to hide but it is unjust and unreasonable to continuously harass us with a lot of fool investigators when every detail of the labor conditions has been reported and misrepresented by previous agents.

The mill people are alive to such evils as exist and are doing the best they can for the welfare of the operatives. The operatives are contented with their lot and resent these investigations even more than the mill owners.

We want to be let alone of be told of some just cause for the interference.

Meeting of National Association of Cotton Manufacturers.

The semi-annual meeting of the National Association of Cotton Manufacturers will be held at Boston, Mass., Wednesday and Thursday, April 24 and 25, 1912. The sessions will be held in Paul Revere Hall in Mechanic Building, in acceptance of the invitation of the Textile Exhibitors' Association, which is to hold an exhibit of textile machinery during that week.

The sessions will be called to order Wednesday at 11 a. m. and 2:30 p. m., and on Thursday at 10:30 a. m. and 2:30 p. m. Members and those proposed for membership can obtain unlimited complimentary tickets to the fair on showing their membership badges which may be obtained at the entrance, where the names will be recorded and the badges given.

His Honor, John F. Fitzgerald, Mayor of Boston, will make an address of welcome to the Association.

In addition to the opening address by the president and the address of welcome by Mayor Fitzgerald, papers are expected on the following subjects:

Cop Dyeing.
Cotton Manufacturing Waste.
Decca Muslins.
History of Cotton Classification.
Methods of Cost Accounting.
Mill Roofs.
Sizing Equipment in Cotton Mills.
Standards of Cotton Yarn.
Steam Efficiency in Textile Plants.
The Banking Problem in Cotton Manufacturing.
The Buying of Labor.
Transmission of Power by Rope.

The Committee on Meeting, wearing white badges, consists of Messrs. Charles T. Main, Chairman; W. Lrving Bullard, William M. Butler, Daniel J. Danker, Augustus De Cort, S. Harold Greene, George H. Hills, William E. Hooper, Abbott P. Smith and Arthur S. Thomas, and will take detailed charge of the meeting.

Badges.

Members or those proposed for membership, will receive badges.

Guest badges will not be given at this meeting, but the Textile Exhibtors' Association will place in the hands of the Secretary a number of complimentary tickets for the guests of members.

Hosiery Mills Behind With Orders.

In talks with the representatives of different hosiery mills, it is found that most of the mills are running overtime right now, and are having difficulty in catching up with orders.

Some of them, it is said, have called in their salesmen, and are allowing them to loaf for the next 60 or 90 days, to give the mills a chance to catch up.

One prominent commisssion house has recently raised the price of all its hosiery in all grades, and expects to make another raise within the next two or three days. — Daily Trade Record.

Good Report From China.

The following extract from a market report of last week is encouraging as it shows that more export business can be reasonably expected from China:

"The export end of the cotton goods market is showing more signs of life than has been the case for several weeks. Buyers for China account are sending forward shipments for sheetings ,mostly for 4.70 goods. While the prices named in the inquiries received are not up to the levels the mills are asking it is believed that when the China buyers get more thoroughly in touch with the changes which have occurred in the market since their last purchases were made the higher levels will be met. After the long silence from this buying quarter the inquiries coming forward are causing considerable encouragement and strengthening the belief that the situation in China is gradually being straightened out. That buyers their equipment probably doubling present equipment during this year.

PERSONAL NEWS

W. T. Moody has resigned his position as overseer of spinning at the Bonham (Texas) Cotton Mills.

R. L. Martin has resigned his position as overseer of weaving at the Roanoke Mills, Roanoke Rapids, N. C.

Arthur Colman has resigned his position as card grinder at the Sevier Mills, Kings Mountain, N. C.

F. G. Parker has returned to his former position as superintendent of the Fidelity Mills, Charlotte, N. C.

Will Allison has resigned as second hand at the Riverside Mills, Anderson, S. C., and is now farming.

G. W. Brigman has resigned as superintendent of the Raeford Powed & Mfg. Co., Raeford, N. C.

R. L. Gaddy is installing new Crompton and Knowles looms at the Calvine Mills, Charlotte, N. C.

L. E. Gurlee has resigned as loom fixer at the Poe Mill, Greenville, S. C.

Cull Dennis, from Danville, Va., is now fixing looms at the Poe Mills, Greenville, S. C.

C. L. Taylor has resigned his position as overseer of spinning at the Toxaway Mills, Anderson, S. C.

J. M. Heath has resigned as secretary and treasurer of Atlantic and Gulf Mills, Quitman, Ga.

J. A. Kirkpatrick, from Warenville, S. C., has accepted position as master mechanic at Jonesville, S. C.

Wiley Watts, from Gastonia, N. C., has accepted position as second hand at the Lowell (N. C.) Mill No. 2.

M. L. Hatley has resigned his position as overseer spinning at the Wiscassett Mill No. 1, Albemarle, N. C.

J. T. Honeycut has been promoted from second hand to overseer of spinning at the Wiscassett Mill No. 1, Albemarle, N. C.

W. W. Gregg has resigned as overseer of carding at Marlboro Mill No. 4, McColl, S. C.

Hague Padgett is erecting machinerf at the Simpsonville (S. C.) Cotton Mills.

W. A. Black has resigned as superintendent of the Pomona Mill, Greensboro, N. C.

C. H. Byers, from the Dan River Mills, Danville, Va., has accepted position as overseer of carding at the Dixie Mills, Mooresville, N. C.

J. P. Couch, of Batesburg, S. C., has accepted position as overseer of weaving and the cloth room at the John E. Smith Mills, Thomson, Ga.

W. S. Dean has been promoted from second hand to overseer of carding at the Locke Mills, Concord, N. C.

A. T. Nuttall, who recently became carder and spinner at the Alta Vista (Va. Cotton Mills, has resigned the carding.

C. H. Hammond, from the Fort Mill (S. C.) Mfg. Co., has accepted position as overseer of carding at the Fidelity Mill, Charlotte, N. C.

L. B. Gibson has resigned as roller coverer at Lockhart, S. C., to accept position as second hand at the Union (S. C.) Cotton Mills.

Rufus Mason has accepted position as second hand in the cloth room at the Spartan Mills, Spartanburg S. C.

J. M. Melton, of Wadesboro, N. C., is now overseer of spooling and twisting at the Wiscasset Mill No. 2 and 3, Albemarle, N. C.

W. A. Stowe has resigned as overseer of night carding and spinning at the Highland Park Mill No. 3, Charlotte, N. C.

—. —. Osgood is now erecting new spinning for the Howard and Bulloch Machine Co., at the Lowell (N. C.) Mills.

CARDS, DRAWING,
SPINNING FRAMES,
COTTON MILL MACHINERY
MASON MACHINE WORKS
TAUNTON, MASS.
EDWIN HOWARD, Southern Agent
Charlotte. N. C.
COMBERS, LAP MACHINES
MULES, LOOMS.

E. C. Hendricks has re-accepted his former position as overseer of carding at the Marlboro Mill No. 4, McColl, S. C.

W. J. Hamilton, from Monroe, N. C., has accepted position as second hand in the carding at night at the Brevard (N. C.) Cotton Mills.

R. A. Fitch, from Hillsboro, N. C., is now overseer of weaving at the Roanoke Mills, Roanoke Rapids, N. C.

J. B. Bailey has been promoted from second hand to overseer of carding at the Coosa River Spinning Co., Bon Air, Ala.

T. L. Curlee, from Goldsboro, N. C., has accepted position as superintendent of the Hopedale Mills, Burlington. Ala.

A. B. Ervin, from the Wamputn Mills, Lincolnton, N. C., is now overseer of carding at the Vivian and Howell Mills, Cherryville, N. C.

J. T. Barclay has resigned as section hand at the Fulton Bag and Cotton Mills, Atlanta, Ga., and accepted a similar position at the Aragon (Ga.) Mills.

C. W. Russell, formerly with the Moffatt Machinery Co., Charlotte, N. C., has accepted position as master mechanic at the Chadwick-Hoskins Mill No. 2, Charlotte, N. C.

J. H. Lytle has resigned as second hand at the Phoenix Mill, Kings Mountain, N. C., and accepted position in the spinning room at McAdenville, N. C.

J. B. Meachum has resigned his position as superintendent of the Fidelity Mills, Charlotte, N. C., and accepted similar position at the Delta Mill, McComb City, Miss.

W. R. Ennis, Jr., has accepted the position of overseer of spinning at the Amazon Mills, Thomasville, N. C.

O. W. Wall, of Mooresville, N. C., is now overhauling in the carding department at the Exposition Mills, Atlanta, Ga.

J. W. Prim, formerly of Columbus, Ga., has accepted position as overseer of spinning at the Cowikee Mills, Eufaula, Ala.

C. H. Hammond has resigned as overseer of carding and spinning at the Fort Mill (S. C.) Mfg. Co., to become overseer of carding at the Fidelity Mill, Charlotte, N. C.

R. B. Foster has resigned as loom fixer at the American Spinning Co., Greenville, S. C., and accepted similar position at the Poe Mill, of the same place.

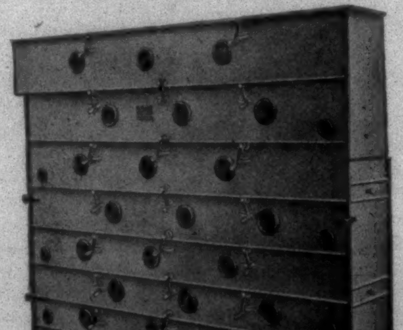
B. R. Robinson has resigned as section hand in spinning at the Home Cotton Mills, St. Louis, Mo., and is now second hand at Munford, Ala.

J. H. Reid, from the Barker Cotton Mill, Pritchard, Ala., has accepted position ~~as overseer~~ of cloth room at the Lauderdale Mill, Meridian, Miss.

J. R. Sisk has resigned his position with the Whittier Mills, Chattahoochee, Ga., and accepted position as assistant overseer of spooling and warping at the Manchester (Ga.) Mills.

E. W. Morris, who for five years has been chief engineer and master mechanic at the Chadwick-Hoskins Mill No. 2, Charlotte, N. C., has resigned that position to become traveling representative for the W. O. W. and W. C.

OVERFLOW PERSONALS PAGE 16



CAPACITY 1000 POUNDS LINT PER HOUR.

Mr. Superintendent:

C. O. B.
It works!

Do you want "laps of uniform weight?
Is it worth anything in dollars and cents to your mill?

THE TRUTH

A prominent New England Cotton Mill, after testing the C. O. B. Machine for three weeks in their mill, found much to their surprise and pleasure, that their "laps" did not vary more than ONE OUNCE in weight, day in and day out.
ALL OUR CLAIMS FOR THIS MACHINE WERE PROVEN.
They ordered a full equipment for their mill with a RUSH ORDER.
Why not you? Write us and we will help you.

MANUFACTURED BY
EMPIRE DUPLEX GIN COMPANY, 68 William St., New York

Southern Representative
"They will tell you all about it." ATLANTA EQUIPMENT CO., Atlanta, Ga.

MILL NEWS ITEMS OF INTEREST

Decatur, Ala.—An overall factory may be established here by the Chickamauga Mfg. Co., Rome, Ga.

Rock Hill, S. C.—The Victory Mill has installed the Kinkead apparatus for the alignment of shafting.

LaFayette, Ga.—The LaFayette Cotton Mills expect to increase their equipment considerably during the coming twelve months.

Gaffney, S. C.—There are several engineers in the city giving the engines at the Gaffney Manufacturing Company a thorough overhauling.

Huntsville, Ala.—The Merrimack Mfg. Co. plans to replace all the old stationery flat top cards in Mill No 1 with the latest improved revolving flat cards. Other improvements of a minor nature are also contemplated.

New Orleans, La.—The management of the recently reorganizzed Maginnis Mills plan to put the mills in operation within a short time. It is stated by the management that no improvements or additions are to be made at present.

Lincolnton, N. C.—The new company recently mentioned here as planning a plant for the cutting of shuttle blocks has been made a certainty. C. D. Roberts, of Greensboro, N. C., will be the proprietor. Power will be purchased from the Lincolnton Handle Company.

Selma, Ala.—The Cawthorn Mills which were purchased by the Ames Bag Machine Company of Cleveland, O., have started operations on full time with a large complement of help. The mill will probably go on night work within a short time. A commissary, for the operatives will be placed near the mill.

Jonesville, S. C.—A consignment of 120 bales of cotton was set afire at the Southern Railway depot Wednesday morning by sparks from the north bound passenger train. The cotton was consigned to the D. E. Converse Co., of Spartanburg, S. C. By the voluntary and heroic efforts of the citizens of the town, all but thirty-five bales were saved.

Kannapolis, N. C.—The mills at this place are both running full time and outside hands may be seen in every direction at work. A squad is busy excavating for the new mill, and the new bleachery is on the way also. A new store building is going up near the depot, besides a score or more new dwellings are being built at present.

The addition to the Cannon Manufacturing Co.'s spinning mill has been completed and the plumbing and wiring has been done and now the machinery is being placed.

Marion, N. C.—In addition to the contracts already anounced as being awarded for the new machinery at the Marion Manufacturing Company, the following contracts have also been awarded:

All cloth room machinery from the Curtis and Marble Machine Co., Worchester, Mass., slashing equipment from the Lowell Machine Shop, Lowell, Mass., picking machinery from the Kitson Machinery Co., Lowell, Mass.

Griffin, Ga.—It has been announced that the Boyd-Mangham, the Central and the Spalding Mills, of the Boyd-Mangham Mfg. Co., which have been shut down for some time on account of the recent bankruptcy proceedings, as noted, will resume operations at an early date. They will be operated as the Georgia Cotton Mills, having recently been purchased by Atlanta and Griffin capitalists.

High Point, N. C.—The new silk mill erected by Stheli & Co. on East Russell street is fast nearing completion. Nothing but weaving will be done in this mill. The looms in the old mill will be moved in the new building in a few days. This will give more room for the twisting and throwing departments. The motive power used in both the old and new mills is electricity generated by the company's own plant.

Bennettsville, S. C.—Fire broke out in the waste room, a building in which bales of waste were stored, at the Marlboro Mill No. 5, Tuesday evening, April 2. The cotton mill has a fire department of its own, which responded to the alarm and extinguished the flame. Considerable damage was done, especially to the roof of the waste building. It is said that it will have to be covered anew.

Rockwell, N. C.—A special meeting of the stockholders of the Barringer Mfg. Co. was held recently to vote on a proposition to turn the mill over to J. W. Cannon. The proposition of Mr. Cannon will no doubt be accepted. He will at once put in 3,000 additional spindles, doubling the capacity of the mill. The product will be used in the Kesler Mill at Salisbury and also in the Concord mills of Mr. Cannon.

Charlotte, N. C.—A charter was received here for the National Fire Appliance Company. The incorporators are U. S. Goode, J. T. Fletcher and J. D. McCall. A capital stock of $25,000 is authorized with the privilege of increasing it to $50,000 Business may be commenced when $10,000 is paid in. The company is empowered to manufacture and sell fire fighting apparatus and also to become agent for any concern manufacturing these necessities.

Norfolk, Va.—The Norfolk Mattress Company, capitalized at $50,000, with Benjamin Margolius president, for the manufacture of cotton felt and felt mattresses, will have its factory at the corner of Granby and Twenty-third streets, where the new corporation will engage in an extensive business for wholesale distribution throughout the country. The officers of the new corporation are as follows: President, Benjamin Margolius; vice-president, D. L. Margolius; secretary-treasurer, S. E. Myers.

Charlotte, N. C.—Charles W. Johnson has selected a site between the Mecklenburg Mill and the plant of the General Fire Extinguisher Co. in North Charlotte for the location of his coarse yarn mill. He has ordered the material for the plant and the grading of the site for the foundations will begin within the course of a short time. The mill will be equipped with 5,000 spindles for the handling of waste and low-grade cotton.

Chester, C. C.—At the annual directors' meeting of the Wylie Mills, held at the mill last week, the following officers were present: Thos. E. Parker, president; T. K. Elliott, vice-president; Lewis W. Parker, treasurer; T. M. Marchant, assistant secretary. Also Benj. Zimmerman, treasurer; and M. M. Trotter, Jr., vice-president of the Edgefield Mfg. Co., one of the Parker mills, and H. G. Welborn, general manager of the Columbia group of Parker mills.

After a thorough inspection of the local mill, these gentlemen expressed themselves as highly pleased with the manner in which the recent overnauling ana enlarging of the property has been handled.

As it stands today, the Wylie Mill, which until recently was a yarn mill only, is a new modern plant for the conversion of raw cotton into high grade fancy shirtings and dress goods. Among other new equipment are 1,500 additional spindles, 5 Whitin cards, 6 roving frames, 2 slashers, 6 warpers, 640 32-inch latest Winthrop looms driven by 3 250 horsepowei motors, and complete cloth room equipment for the inspection, measuring, weighing, baling and packing of cloth for shipment. The machinery has been so re-arranged that all the spinning and spooling is on the first floor, and all carding on the second. A complete automatic distributing system has been installed by which the cotton is blown from the opener room in the warehouse to the breaker lappers in the mill, the supply being controlled automatically, and a Cramer humidifier system maintains an even temperature and humidity. The weave shed has a "monitor," or ventilated skylight from end to end, the boilers have been remodeled, and every piece of such of former equipment as remains in the mill has been put in absolutely first class shape, and the whole plant completely remodeled. There is a new warehouse of 2,000 bale capacity, and 110 feet up in the air is a 50,000 gallon water tank, supplying the sprinkler system which protects the entire plant from fire.

Improvements have not been confined to the mill. The mill village has new streets and sidewalks, and additional modern, comfortable tenements for about thirty families built—all with screen doors and windows. There is a new four-room modern school house with individual desks, and a club house and library, which will also be used for lodge meetings by the different orders represented in the village.

Spray, N. C.—By a decree of the Federal bankruptcy court the mill properties of the Rhode Island Cotton Mills, the Spray Woolen Mills and the American Warehouse Company, all of Spray, were sold at public auction last week, the three properties bringing a total of $432,000. The German-American Cotton Mills and the Lily Cotton Mills, formerly owned and controlled by the same corporation and sold recently under court decree, brought $485,000, the total for the five properties being $917,000. These bids will be submitted to the court with the recommendations of the trustees that the sales in each instance be confirmed.

The properties were all bid in by a thread mill company of Monticello, Indiana, a subsidiary company of the Marshall Field Company of Chicago, principal creditor and a large bondholder of the bankrupt mills.

The statement was authorized that they would continue to operate all the properties and that large improvements were contemplated, representing a total investment of possibly $2,000,000. The bids made and to be reported to the court were Spray Woolen Mills, $135,000; Rhode Island Mills, $140,000; American Warehouse Company, $157,000.

It is said that the bonded indebtedness of the five properties and the cost of the court litigation will wipe out all the money secured from the sale of the property and will leave a loss of approximately $450,000 to unsecured creditors.

After quite a prolonged contest between attorneys interested in the outcome of the sale of the various mill properties at Spray, now in the bankruptcy court, Referee Ferguson confirmed the same and ordered deeds made to the purchasers, provided, that if within ten days no bid raising the amount ten per cent was offered by a reliable purchaser, with bond for fulfillment of said raise.

The hearing was not completed on account of the fact that Referee

Fergusion was compelled to take a train for Kinston to see his mother who is very ill there. An adjournment by consent was taken for several days. The principal fight was over the report of R. R. King, attorney for the trustees of the Rhode Island Mills. He reported that the same was sold in two separate lots for $100,000 and $40,000 respectively, and requested that the sale be confirmed to the purchaser, the Thread Mill Company of Monticello, Ind., understood to be a subsidiary of the Marshall Field Company, of Chicago, the largest creditor and stockholder of all the five mills.

On behalf of the bondholders, ex-Judge Burwell, of Charlotte, and J. A. M. Scales, of Greensboro, entered a protest against the confirmation of the sale of the Rhode Island Mills for $140,000, unless the trustees would provide for payment of interest on the bonds, which the reputed sale would not do. Judge Burwell called attention to the fact that the trustees had reported that the Rhode Island Mills property was sold in two separate lots when the court decree ordered them sold as a whole. That the order of the court had not been complied with and therefore the sale was void. That the price of $140,000 reported by the trustees as a fair price was not so, in light of the fact that the appraisers had valued the property as worth at least $295,000.

Mr. Scales, for the bondholders, contended that they had not had a day in court. That they had not had a reasonable time in which to protect themselves from a complete sacrifice of the property. That for this reason alone the sale was void and they objected to a confirmation of the same at such a depreciated value, which would not insure to the bondholders or mortgage creditors any interest at all on their claims. Judge Bynum representing unsecured creditors, Marshall Field Company; R. R. King, representing the trustees as well as Marshall Field Company, urged the confirmation of the report of the trustees, citing the fact that the prices bid were without competition and to order a resale would amount to shutting down the mills besides giving no promise of a higher price at the next sale. Referee Ferguson finally decided to confirm the sale. He said that if within ten days a ten per cent bid was offered he would order a resale. From the order of the referee Mr. Scales, for the bondholders, gave notice of an appeal to Judge Boyd and to the United States Circuit Court.

No contest was entered over confirmation of sale of the American Warehouse Company, $157,000, the German-American property at $435,000, the Lilly Mills at $50,000 and the Spray Woolen Mills at $135,000.

When the sale was made, it was given out that the amounts would pay the bonded debt, the court litigation, including receivers' certificates for operating the mills and the lawyers' fees in bankruptcy.

Since examining into the matter, the bondholders creditors seem to have discovered that they would get left as to payment of interest on the bonds, and the fight now is over this matter, while the unsecured creditors, with the exception of Marshall Field Company, as well as the stockholders outside of the Field Trust, will get nothing.

Attorneys for the bondholders, expressed confidence that when the whole matter is reviewed by Judge Boyd, the sale at least of the Rhode Island Mills at $140,000 will be set aside.

In the argument on the matter of the purchase of the Rhode Island Mills by Marshall Field Company at $140,000, Mr. Scales referred to the report of the appraisers, who valued the property at the lowest at $295,000. Mr. King reported that Mr. Julius Cone, one of the appraisers told him that $140,000 was a first-class sale.

Cotton Mill Trades.

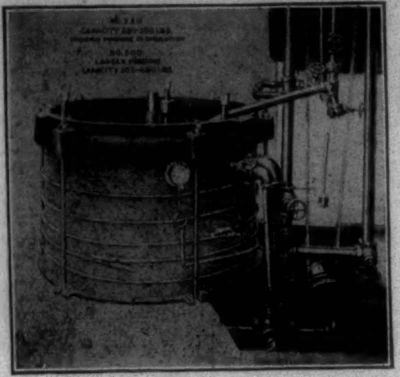
Cotton mill people ought to take pride in the trades of carding, spinning and weaving. These are amongst the most respectable trades in the world, and at the same time the oldest. Wherever cotton spinning and weaving is done, there is a regular and even flow of wages which make activities in commerce. Our home operatives are not to be patronized or pitied. They handle more money in wages than perhops most of the other trades, and if they would form the habit of saving their money, both they and the savings banks would prosper better. Much is being done by the cotton mills in the cotton mill villages to improve education, but enough stress has not been put upon the subject of thrift and economy in the way of savings. The field of textile work offers large advancements. There is many a superintendent today getting a good salary who started in at very small wages. We dont, any of us, perhaps, properly appreciate the value of the trades of the spinner, weaver or carder, nor the possibilities of advancement that these often lead to.
—Greenville News.

Consistent.

"Was that entertainment what you'd call a consistent piece of work?"

"It was," replied the theater manager. "The scene was located on a mythical island and we played to mythical audiences and drew mythical salaries."—Ex.

Economical Cotton Dyeing and Bleaching
In the Psarski Dyeing Machine
Saves Labor
Saves Dyes
Saves Drugs
Saves Steam
Saves Water



Saves Fibre
Sulphur—Developed—Vat Dyes
Done Equally Well
RAW STOCK DYEING—The cotton goes to cards in as good condition as directly from bales. Is not rolled into balls and strings.
BLEACHING—Bleached and washed PERFECTLY CLEAN—FREE FROM CHLORIN OR ACID. 3½ hours to batch. Is not pounded and twisted into practically waste.
SKEIN DYEING—No Boiling Out—No Tangles—Yarns are left Smooth and in perfect condition for winding, knitting, etc.
HOSIERY—Recommended size of machine does 300 pounds to batch, SULPHUR OR DEVELOPED BLACKS. It is not Roughed—No Singeing required—No Sorting—No Damaged.
15 to 20 per cent Saving in Drugs
The Psarski Dyeing Machine Co.
3167 Fulton Road CLEVELAND, OHIO
WILLIAM INMAN, Agent
364 Newport Avenue
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R. D. BOOTH, Agent
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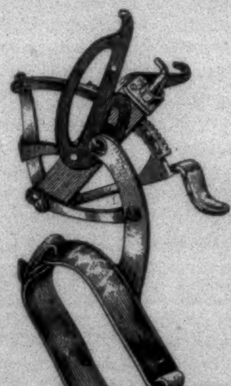
The Byrd Knotter



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Simple of Operation
Durability Guaranteed
Small Repair Cost
Byrd Manufacturing Co.
DURHAM, N. C.

AMERICAN MOISTENING COMPANY
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THE ONLY PERFECT SYSTEM OF AIR MOISTENING
COMINS SECTIONAL HUMIDIFIER
JOHN HILL Southern Representative, Third Nat. Bank Building, ATLANTA' GEORGIA

Personal Items

A. H. Long of Social Circle, Ga., is now fixing looms at Milstead, Ga.

Chas. Borders has resigned as overseer of weaving at Thomson, Ga.

D. Campbell has accepted the position of second hand in weaving at Hope Mills, N. C.

Siney Adams has been elected elected secretary of the Manchester Mills, Rock Hill, S. C.

O. J. Lydia of Maiden, N. C., has accepted a position with the Flint Mills, Gastonia, N. C.

C. J. Gault is now night overseer of spinning at the Cleghorn Mills, Rutherfordton, N. C.

D. Barnes is night overseer of carding at the Cleghorn Mills, Rutherfordton, N. C.

Henry Edwards has accepted the position of head card grinder at the Dan River Mills, Danville, Va.

W. R. Thomason, formerly overrsee of carding at Millstead, Ga., is superintendent of the Palmetto (Ga.) Mills.

D. P. Langford, from Woodruff. S. C., is now fixing looms at the Banna Manufacturing Co., Goldville, S. C.

Mill Destroyed by Fire.

The hosiery plant and dye house of the American Hosiery Mills at Kernersville, N. C., were destroyed by fire of unknown origin at noon Tuesday. The loss is estimated at $100,000. Two hundred operatives are thrown out of employment.

Danville Mills Enlarge.

Danville, Va.—The Dan River and Riverside Cotton Mills, incorporated, have ordered plans prepared for a million and a half dollar addition to the present seven million dollar investment in this group of textile plants. The new mill is to be part of the Dan River group at Schoolfield, a Danville suburb. Work will be begun about July 1, to be completed in a year. The new mill will manufacture the finer grades of goods demanded by the trade. The opportunity to purchase machinery equipment advantageously expedited the determination to build.

The addition will consist of 70,000 spindles and 2,000 looms.

Nanking, China.

The impending removal of the capital of the new Chinese Republic which, according to the advices of the best informed sources will necessarily follow in a couple of years the establishment of the new form of government, will throw open a wide field of opportunities in this city, which would, in all likelihood, be chosen as the future seat of government. It is reported that following the advice of their respective consuls, several foreign firms in the textile trade have made extensive preparations toward establishing new connections here, in order to meet future opportunities arising from the change. It is also reported that this city will be entirely rebuilt along the plans of American cities, which would necessarily mean a new standard of living with more necessities of life.

With the rebuilding of the city, immense engineering works will be carried out along the Yangtse Valley, involving a large staff of trained and educated Chinese and foreigners, who are all possible customers.—Daily Trade Record.

Terms of Sale of Trion Mfg. Co.

Terms to govern the sale of the Trion (Ga.) Manufacturing company's property, were agreed upon Monday morning at a meeting of the creditors of the bankrupt concern, held at the Floyd county court house. It was decided to dispose of the holdings at such a date as is selected by the trustee, T. W. Lipscomb. In all probability this will be the latter part of May, as the property must be advertised thirty days before the sale.

The property must be offered as a whole, and in parts, and the best bids will get it. The sale is subject of course to review and confirmation by the referee, within ten days after the sale. It was agreed not to ask cash for the property, but to allow 25 per cent down and the rest on time.

An upset price of $500,000 was agreed upon for the mill property and it will not be sold for less than that. No upset price was fixed upon the other property, such as tenant houses, personal property, notes, accounts, etc. This will aggregate in the neighborhood of $250,000.

Reorganization Committee.

A committee on reorganization is at work and is endeavoring to arrange a plan whereby the creditors can buy the mills at the total face value of the indebtedness, and issue stock to the creditors for their claims. This reorganization committee holds power of attorney for $600,000 of the indebtedness. It is composed of Capt. Chas. A. Lyerly, president of the First National Bank of Chattanooga and the officers of several nothern banks. Capt. Lyerly was at the meeting Monday and told the creditors of the progress that had been made.

Under the reorganization plan it is believed that the mills could be operated at a profit and that each creditor would receive full value for his claim.

Import of Textiles.

The figures of imports for the eight months ending in February are now at hand. They show a general decline in the principal lines and particularly in cotton goods and dress goods. The effect of the Payne-Aldrich tariff bill in excluding the importations of hosiery is clearly seen. Wool importations are larger for the period than they were in the corresponding period of 1911, but they are still under the importations of 1910. Laces show some increase, due to the vogue in dress trimings.

Manufactures of cotton cloth imported for the eight months ending February were valued at $5,518,290, as compared with $6,125,123 for 1911.

Cotton knit goods, including stockings, hose and half-hose, dutiable, were valued at $2,038,753, as compared with $2,820,642 for 1911.

Cotton handkerchiefs or mufflers were valued at $250,803.

Cotton laces, including edgings, embroideries, edgins, ruchings, lace window curtains, trimmings, handmade laces, nets or nettings, and galloons were valued at $27,298,612, as compared with $25,855,010 for 1911.

Cotton plushes, velvets, velveteens and other pile fabrics were valued at $1,735,798; thread, not on spool, yarn, warps, or warp yarn was valued at $3,588,735.

The total manufactures of cotton were valued at $47,052,092, as compared with $46,772,782 for 1911.

Imports of wool, unmanufactured for the eight months ending February were valued at $47,052,092 as compared with $13,325,351 for 1911.

Manufactures of wool including carpets, clothing, dress goods and cloths imported for the eight months ending February, 1912, were valued at $11,009,171, as compared with $13,693,168 for 1911.

Imports of silk, unmanufactured, for the eight months ending February were valued at $45 ,077,217, the total value of silk manufactures imported for the same period was $19,782,115, which is a decrease as compared with $22,099,913 for 1911

Linen importations and burlaps imported for the eight months ending February were valued at $36,840,128, as compared with $46,772,782 for 1911.

Cost Systems and Leaks in the Mill.

Many leaks are to be found in a manufacturer's business if only a probe into the question is sufficiently conducted. Many of these may no doubt seem trival, but they are in the aggregate of so vital importance as a setback to the effort of producing the maximum volume of goods at the minimum cost as to be drawn given careful attention to and followed up.

In generally treating of this subject it is difficult to point out in a mill any particular source of leak. The investigations which have been proceeding for years upon the matter of cost accounting have clearly brought out the fact that many mills are not running their business in the systematic way they should.

In the progress of manufacturing, from the raw material or yarn to the finished and boxed product, it is of the greatest importance that every operation of manufacturing or process should be systematized so that there is no delay and that a careful record of each item of this manufacturing is made as the product advances from the beginning to the finish. Many mills have found it advantageous to install a ticket system in which a printed ticket bearing the names of the operatievs doing the different manufacturing processes, the time taken in each operation and other necessary details are written down so that every batch of hosiery, underwear, or half dozen sweater coats or dozen knitted caps are completely covered in such a way that to obtain the cost, to make comparisons of the expenses and work of the different operatives, etc., is easily done. This is only one instance of the introduction of "system" into the mill.

It is a matter of comment among the knit goods trade generally that comparatively few knit goods manufacturers know exactly how their business stands until after the inventory and once-a-year balancing of their books. If this fact were told to 90 per cent of the men engaged in other manufacturing businesses it would be difficult to convince them of the truth.

It is quite true that a few of the large concerns are unusually up-to-date in every particular, but for one that is there are fifty that are not. This cost-accounting matter has been before the manufacturers for years. It is high time that something was done.—Knit Goods.

As It Looked to Her.

The aviator's wife was taking her first trip with her husband in his airship.

"Wait a minute, George," she said. "I'm afraid we will have to go down again."

"What's wrong?" asked her husband.

"I believe I have dropped one of the pearl buttons off my jacket. I think I can see it glistening on the ground."

"Keep your seat, my dear," said the aviator; 't'hat's Lake Erie."—Ex.

Bradford Soluble Grease

UNEXCELLED as a softening agent in the finishing of Cotton Fabric. Used extensively both by finishers of colored goods and bleachers in finish of white fabrics. Any degree of "softnesss" may be obtained by the proper use of this article. A neutral preparation. Write for recipe for finishing.

ARABOL MANUFACTURING CO.
100 William Street, New York
CAMERON MacRAE Southern Sales Agent CHARLOTTE, N. C.

Want Department

Want Advertisements.

If you are needing men for any position or have second hand machinery, etc., to sell, the want columns of the **Southern Textile Bulletin** afford a good medium for advertising the fact.

Advertisements placed with us reach all the mills.

Employment Bureau.

The Employment Bureau is a feature of the Southern Textile Bulletin and we have better facilities for placing men in Southern mills than any other journal.

The cost of joining our employment bureau is only $1.00 and there is no other cost unless a position is secured, in which case a reasonable fee is charged.

We do not guarantee to place every man who joins our employment bureau, but we do give them the best service of any employment bureau.

Spinner Wanted.

Want overseer of spinning (7,000 spindles) on 12's to 24's hosiery yarns. Must be sober, of good character and produce results. Married man preferred. Also want section man in winding department. State wages expected and full particulars. Address No. 1,014.

Cloth Room Overseer.

An A-1 overseer of cloth room in a 50,000 spindle mill, making ducks, drills, twills, sheetings and osnaburgs. Nothing but a man of wide experience in managing large rooms on this class of work need apply.

This position pays about $1,000 a year, and free house rent. Address No. 1013.

Operatives Wanted.

We will need card and picker room help for night work beginning about May 11th. Can furnish day work for spinners, spoolers and winders in the families of men who take the night work.

Twine Mill Co.,
T. J. McNeely, Supt.,
Roanoke, Va.

Read This:

We are starting up our weaving, and can use a number of first class DRAWING-IN HANDS at GOOD WAGES. Can also use several more families of good SPINNERS. Apply to

R. P. Sweeny, Supt.,
Wylie Mills, Chester, S. C.

Carder Wanted.

An A-1 overseer of carding for a 60,000 spindle mill, manufacturing cloth, rope, and twine, and making yarns from 1's to 24's. We do not want anyone to apply for this position except an A-1 carder, who thoroughly understands the theory of carding, and has had some years practical experience running large rooms on this class of work, and who can turn out good clean, and smooth even yarns, free of leaf and dirt of all descriptions.

This mill is located in the South. This is a good position for the right man, and pays, including free house rent, about $1,400 per year. Address No. 1012.

Wanted.

Card and weave room help who play in band, especially cornet players. Will give some inducement to such help. Address
Shelby Cotton Mills, Shelby, N. C
W. P. Leister, Supt.

WANT position as overseer of carding. 17 years in card room. 7 years experience as overseer. Can furnish good references. Address No. 123.

WANT position as superintendent, or overseer of large weave room Have had long pracetical experience and can furnish satisfactory reference. Address No. 126.

WANT position as engineer and machinist. Now employed but could change on short notice. Can furnish good references. Address No. 127.

WANT position as overseer of carding; or carding and spinning in small mill. Age 34. Married. Long experience. Can furnish good references. Address No No. 128.

WANT position as superintendent of yarn mill. Have had six years' experience hosiery yarns. Can furnish good references. Age 30. Married. Address No. 129.

WANT position as overseer of carding or spinning or overseer of carding and spinning. Have had long experience and can furnish the best of references. Address No. 130.

WANT position as overseer of weaving in small room, or second hand in large room. Experienced on counts from 18s to 50s. Experienced on plain and Draper looms. Good manager of help, sober and reliable. Good references. Address No. 131.

WANT position as overseer weaving in large mill on white work. 22 years' experience on Stafford Automatic Looms, also expert on Draper Looms. Can get quality and quantity. Will consider nothing less than $5 per day. Address No. 132.

WANT position as superintendent of mill making cloth, or would take overseer of spinning in large erences. Now employed as supmill. Long experience, good referintendent but wish to change. Address No. 133.

WANT position as carder or spinner. Can take position in short notice and can furnish the best of references. Address No. 134.

WANT position as superintendent of small yarn mill, or overseer of carding in large mill. Familiar with white and colored goods. 23 years experience in mill business. Now employed as superintendent. Would not consider less than $3.50 per day. Address No. 135.

WANT position as superintendent of yarn mill. Experienced on white and colored yarns from 8's to 40's. Have 23 years experience and can give good references. Address No. 135.

WANT position as overseer of weaving. Experienced on both colored and white work. Age 34. Married. Good references. Address No. 136.

WANT position as overseer of carding at not less than $3.00. Now employed but wish healthier location. Have had long experience and can furnish best of references. Address No. 137.

WANT position as superintendent or overseer of carding and spinning at not less than $4.00. Now employed in large mill but wish to change. Good references. Address No. 138.

WANT position as carder and spinner or spinner in large mill. Age 34. Married. Good experience and references. Address No. 139.

WANT position as superintendent. Long experience and now employed but wish larger mill. Can furnish best of references. Address No. 140 .

WANT position as superintendent or carder and spinner. Now employed and can furnish good references. Address No. 141.

WANTED position as overseer spinning by practical as well as a technical man. Married. Am strictly temperate. Can come on short notice. Will consider nothing less than $2.50 per day. Address No. 142.

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Personal Attention Guaranteed
30 Years Active Service
SIGGERS & SIGGERS
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Suite 34 N. U. Bldg. Washington, D.C.

WANT position as overseer of spinning, Experience on all numbers but prefer fine work. Am from the South but for several years have been with fine yarn mills at New Bedford and other New England towns. Good references. Address No. 143.

WANT position as overseer of cloth room. 20 years experience. 10 years at present place. Strictly sober. Good references. Address No. 144.

WANT position as superintendent or overseer of large card room. Have had long experience and am now employed. Address No. 145.

WANT position as superintendent. 27 years mill experience. 8 years on present position. Experienced on both white and colored goods. Satisfactory references. Address No. 146.

WANT position as overseer of weaving. Experience on both plain and fancy goods but would prefer box loom job. Have filled former positions satisfactorily and can get production at low cost. Address No. 147.

WANT position as superintendent in North Carolina, South Carolina or Northern Georgia. Long experience and can furnish best of references as to ability and character. Address No. 148.

WANT position as overseer of weaving. Married. Age 40. Have run some of the largest rooms in S. C. and Ga. Can give good references. Address No. 152.

WANT position as superintendent. Have had long practical experience and am now assistant superintendent of a large mill and giving satisfaction. Can give as reference my present employers. Address No. 149.

WANT position as superintendent or carder in a large mill. 15 years experience as carder. 4 years as superintendent. Experienced on both plain and fancies. Best of references. Address No. 150.

WANT position as overseer of weaving in a good mill. Have had eleven years experience on plain and check work. Address No. 151.

(Continued on Page 18)

RICHARD A. BLYTHE
(INCORPORATED)
Cotton Yarns Mercerized and Natural
ALL NUMBERS
505-506 Mariner and Merchant Building PHILADELPHIA, PA.

SHAMBOW SHUTTLE COMPANY
WOONSOCKET, R. I.
PATENT HAND THREADING SHUTTLES

WANT position as overseer of weaving. Have held present position as overseer for four years. Have had good experience on Draper, Crompton Knowles and dobby looms. Good references. Will not consider less than $3.50. Address No. 153.

WANT position as overseer of weaving. 15 years' experience on both white and colored goods. Can furnish references from first class mills. Address No. 154.

WANT position as superintendent of either yarn or weaving mill of 5,000 to 15,000 spindles. At present employed in fine colored goods mill. Age 32. Married. 20 years' experience. Good references. Address No. 155.

WANT position as overseer of carding or spinning. Have had long practical experience and am now holdng position in first-class mill but prefer to change. Address No. 156.

WANT position as superintendent. 36 years of age. Strictly sober. Best of references. Would consider large carding or spinning job. Held present position six years. Address No. 157.

WANT position as overseer of spinning. 10 years' experience as overseer on No. 30's to 100's. Can give good references. Married. 30 years old. Address No. 158.

WANT position as superintendent. Have had long experience on coarse work and blanket manufacturing. First class references. Address No. 159.

WANT position as overseer of carding. Long experience and have always given satisfaction. Now employed but prefer to change. Good references. Address No. 160.

WANT position as overseer of slashing, beaming (long or short chain), spooling, warping or drawing-in. Have had long experience and am expert on sizing. Address No. 161.

WANT position as superintendent. Now employed but prefer to change. Can furnish first class references both as to character and ability. Address No. 162.

World's Spinning Prosperous.

Inquiries directed to the leading cotton centers in Europe and America by Weld & Co., of Liverpool, give a comprehensive series of replies to the state of that particular industry. On existing conditions, the vast majority of countries report that they are good or improving. This applies to Great Britian, Germany, Austria, Belgium, Spain and Holland. In France, both Normand and Vosges districts report bad conditions, as also do the local cities of Lodz and some of the Moscow plants in Russia. The least favorable reports came from the Italian industries at Filan and Genoa, where spinning is bad.

"Stocks of yarns are almost invariably small or moderate. Spinners are buying lightly and are moderately well stocked with raw cotton. Switzerland and Russia have generally laid in largely, as have also leading German centers of Saxony, Alsace and Westphalia. As to future business spinners are sold ahead from three to nine months, but none so far as a year. Almost invariably they are reported as having covered. Prospects range from good to very favorable. In the weaving trade stocks are small and similad conditions exist.—Daily Trade Record.

Uncle Ezra—How's business in New York, Eben?

Uncle Eben (lately returned)—Awful dead! I was on Broadway one whole day and I didn't see a single load of hay moving anywhere.—Judge.

Naturally Alarmed.

"Ze bootiful heiress scared me to death when she asked if I had anything to hide from ze world." "Monsieur was alarmed?" "Terribly! I thought she had seen ze soiled shirt beneath ze big Windsor tie."—Ex.

GRINNELL WILLIS & COMPANY
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The Desirability of the South
as the place to manufacture cotton goods is illustrated in the increase of 67% quoted by census department. We can offer attractive situations for those desiring to enter this field.
J. A. PRIDE
General Industrial Agent, Seaboard Air Line Railway
NORFOLK, VIRGINIA.

The Logical Location for Textile Mills
The three absolutely necessary commodities for operating successfully a textile mill are POWER, RAW MATERIAL and LABOR.
If your mill is located in a Southeastern State on one of the many CHEAP WATER POWERS which abound in that locality—where cotton is delivered at your factory doors by growers—where intelligent LABOR IS PLENTIFUL and living expenses low, you will realize larger dividends than would be possible with your factory located in any other part of the country.
If you contemplate establishing an industry, we would be pleased to give further and full information regarding location along the Southern Railway System.
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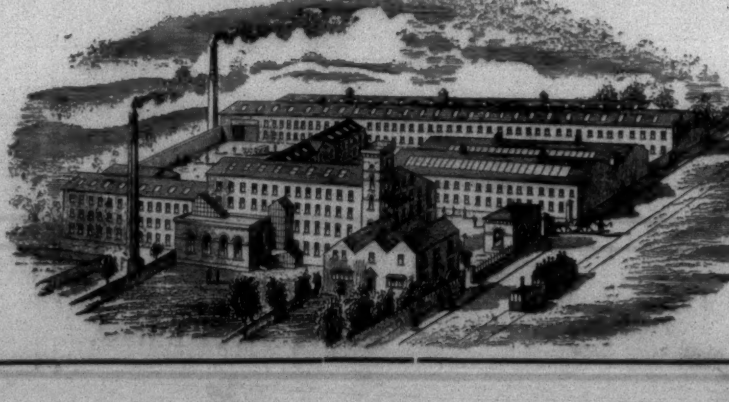

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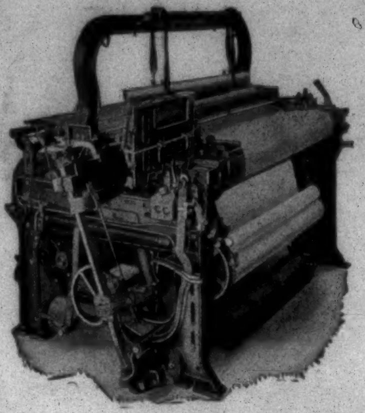

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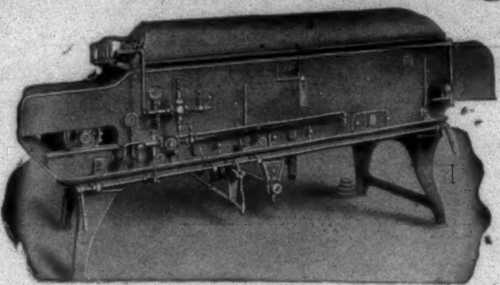

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